

Cycles of Time and Meaning in the Mexican Books of Fate



ELIZABETH HILL BOONE



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Cycles of Time and Meaning in the Mexican Books of Fate

Cycles of Time and Meaning

Joe R. and Teresa Lozano Long Series in Latin American and Latino Art and Culture

in the Mexican Books of Fate

Elizabeth Hill Boone



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To the memory of Mary Elizabeth Smith,
an exacting and erudite scholar who loved those old
ink-soaked rags, a generous mentor and friend,
and a true fan

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Preface

The painted books and manuscripts of Mesoamerica are increasingly the focus of scholarly and popular interest. Those who see the manuscripts for the first time are both astonished at the gorgeous and complex imagery in the books and intrigued by the reality of a system of graphic communication that was fully figural. As Western culture increasingly moves beyond alphabetic writing to embrace other graphic systems that convey information, scholars from a number of disciplines are beginning to look more closely at the painted books of Mesoamerica. Literary theorists, linguists, and specialists in cultural studies are joining anthropologists, art historians, and historians in their efforts to understand the special features of the indigenous codices. Two inexpensive paperback facsimiles of ancient Mexican codices, *The Codex Nuttall* and *The Codex Borgia*, as well as several overviews of the manuscript tradition have brought Mesoamerican manuscript painting to the general public.

Despite this interest, however, the world of the divinatory codices (the books of fate) has remained a particularly impenetrable one for nonspecialists. The very features that allow these books to hold their specialized knowledge—the complexity of the imagery, the multiple calendrical system in many different permutations, their particular graphic structure, and their esoteric content—impede an easy understanding. There are detailed commentaries on individual codices, to be

sure, but what has been needed is a larger synthetic treatment that can introduce and draw people into the field. The present study is intended to help fill this lacuna by providing an overview of the genre, one that explains the esoteric world of Mesoamerican fortunetelling, the canons that governed the creation of the painted books, their content, and the rules by which they were read. In the process it explains how most of the almanacs operate and offers new interpretations of several passages. My goal is to open up and provide an entrance into the world of codical divination. In this way, the book stands as a complement to *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*, which similarly treats the historical genre.

This book has been long in gestation. The idea for it grew out of a Summer Research Seminar that H. B. Nicholson and I organized in 1982 at Dumbarton Oaks. That seminar brought together Nicholson, Ferdinand Anders, Carlos Arostegui, John Carlson, Maarten Jansen, Edward Sisson, Peter van der Loo, and me to focus our attention for the summer on the codices of the Borgia Group. We were a raucous and agreeably argumentative group, and we learned much from each other. The diagrams of the Borgia Group codices that appear in the Appendix to this book draw their inspiration from the brilliant diagrams that Anders developed for the seminar. The seminar culminated in a two-day symposium that brought an additional fifteen scholars into

the effort at Dumbarton Oaks, and it was followed by a session on the Borgia Group at the Manchester International Congress of Americanists.

As Sisson (1983) noted in his summary article recapping the Summer Research Seminar, the core participants agreed on a list of recommendations for further study. Importantly, two have come to fruition. The need for an inexpensive publication series on the codices has been admirably filled by the *Códices Mexicanos* series of the Akademische Druck- u. Verlagsanstalt and the Fondo de Cultura Económica (1991–1996), coordinated and largely edited and written by Anders and Jansen. The need for a translation of Karl Anton Nowotny's *Tlacuilolli* has been met by George Everett and Edward Sisson's (2005) fine translation.

My project for the seminar was the manuscripts' painting style, but my long-term goal was to conceptualize the Borgia Group codices, within the entire corpus of Mesoamerican manuscripts, as a single study. Over time, however, that larger project has split into several separate efforts. Initially my research focused on comparing the codical canons and almanac structure in the Maya and Mexican codices. I am thankful for a residential fellowship at the Institute for Advanced Study in Princeton in 1986–1987, where I composed an early treatment of the divinatory codices. At the institute, Irvin Lavin, Marilyn Lavin, and John Elliott were especially insightful and helpful colleagues. This eventually led to a two-day seminar on the Mexican divinatory codices that I organized at the Center for Advanced Study in the Visual Arts at the National Gallery of Art in Washington, D.C., in 1991, which drew in a broader range of Precolumbian and early colonial specialists.

Between 1991 and 1999, however, my attention turned away from the divinatory books to the pictorial histories. A Senior Fellowship at the Center for Advanced Study in the Visual Art in 1993–1994 allowed me to research the Mixtec histories, including the cosmogony of the Codex Vienna, which figures in the present study. I am grateful to Henry Millon, Stephen Mansbach, and Therese O'Malley for their encouragement and support during my fellowship and for the earlier seminar.

Once the pictorial histories book went to the editor, I again turned back to the divinatory codices, this time in earnest. In the fall of 1998 Victoria Bricker and

I team-taught a graduate seminar on "Mesoamerican Divinatory Codices," which featured lectures and discussions by visiting scholars Anthony Aveni, William Hanks, and John Monaghan. Bricker and I are grateful for the rich perspectives that they brought not just to the seminar but to our own research as well. This and other seminars on Mexican manuscripts at Tulane drew into the project a dynamic group of graduate students, including William Barnes, Lori Bornazian Diel, Richard Conway, James Cordova, Markus Eberl, Erika Hosselkus, Bryan Just, Victoria Lyall, Atlee Phillips, Danielle Pierce, Susan Spitler, Jonathan Truitt, and Margarita Vargas. A sabbatical leave from Tulane University in 2001–2002 allowed me to immerse myself in the material once again. Early versions of Chapter 4 and parts of Chapter 5 were presented as talks at Dumbarton Oaks, the University of Chicago, the Instituto de Investigaciones Estéticas in Mexico City, and the Royal Academy of Art in London. Parts of Chapter 7 were presented at the Instituto Nacional de Antropología e Historia in Mexico City and the Los Angeles County Museum of Art.

Among the many other colleagues who helped shape this study by their comments, insights, and sharing of unpublished information, I thank Harvey Bricker, Robert Bye, David Carrasco, Tom Cummins, Beatriz de la Fuente, Christine Hernández, Robert Hill, Nicholas Johnson, Cecelia Klein, Edelmira Linares, Leonardo López Luján, Eduardo Matos Moctezuma, Susan Milbrath, H. B. Nicholson, Michael Smith, Karl Taube, Teresa Uriarte, and Peter van der Loo. I am especially grateful to Anthony Aveni, Vicki Bricker, Jeanette Peterson, John Pohl, and Mary Elizabeth Smith, who also read and commented on all or part of the manuscript and saved me from many mistakes; those that remain are my own. Finally, I thank John Verano, whose unfailing encouragement and summer field seasons in Peru eased the project along.

Illustrations and diagrams are key to explaining the divinatory codices. This book has been blessed with the assistance of several outstanding graphic artists. Heather Hurst did almost all of the drawings; Markus Eberl did almost all of the diagrams. Emmett Luty of Tulane's Latin American Library and art history graduate student Danielle Pierce scanned many of the images. Pierce also sized, configured, arranged, and

labeled most of the drawings and contributed several diagrams and most of the directionals. The acquisition and the production of the images were supported by the Martha and Donald Robertson Chair in Latin American Art and the George Lurcy Charitable and Educational Trust Fund for Faculty Research of Tulane University, as well as a Millard Meiss Publication Grant of the College Art Association.

I would like to thank Theresa May and the production staff at the University of Texas Press, especially Lynne Chapman and Leslie Tingle. I am very grateful to Kathy Lewis for her superb copyediting and to Linda Webster for such a thorough index.

This book is dedicated to the memory of Mary Elizabeth Smith, the greatest Mixtec codex scholar of her generation and a pioneer in Precolumbian art history.

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Cycles of Time and Meaning in the Mexican Books of Fate

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Containers of the Knowledge of the World

The year was 1541. Tenochtitlan had fallen twenty years earlier; and the Franciscan friar Motolinia (Toribio de Benavente) had already been evangelizing in Mexico for seventeen years when he sat down to write to his friend and patron, Lord Don Antonio Pimentel, sixth count of Benavente. The letter would introduce and accompany Motolinia's *History of the Indians of New Spain* (an account of Aztec religious beliefs and customs as well as the subsequent conversion efforts of his fellow mendicants), on which the Franciscan had labored for many years. Reflecting on his understanding of ideas and events once so foreign to him, he reveals that his knowledge came, at least in part, from the painted books of the Mexicans themselves.

These books looked very different from the European books in his library or the manuscript he had just completed, because they were fashioned of long strips of native paper or hide, which were rolled as a scroll or folded back and forth into pages as a screenfold. Moreover, their messages were painted in images rather than written in letters and words. But for Motolinia, as for the Aztecs, they were containers of knowledge, and books nonetheless.

I shall treat of this land of Anáhuac or New Spain . . . according to the ancient books which the natives

had or possessed. These books were written in symbols and pictures. This was their way of writing, supplying their lack of an alphabet by the use of symbols. Moreover, the memory of man being weak and feeble, the elders in the land disagree in expounding the antiquities and the noteworthy things of this land, although some things . . . have been gathered and explained by their figures. . . . These natives had five books which, as I said, were written in pictures and symbols. The first book dealt with years and calculations of time; the second, with the days and with the feasts which the Indians observed during the year; the third, with dreams, illusions, superstitions and omens in which the Indians believed; the fourth, with baptism and with names that were bestowed upon children; the fifth, with the rites, ceremonies and omens relating to marriage. (Motolinia 1951:74)

Motolinia then declared: "Only one of all these books, namely the first, can be trusted because it recounts the truth." This truthful book, which Motolinia called "the book of the count of the years" and explained in some detail, was the annals history, the book that recorded such secular events as conquests, the succession of rulers, and other noteworthy events that Motolinia understood to be rational facts. Intel-

lectually Motolinia could recognize and accept the validity of this book as a historical record, not unlike the annals and histories written in Europe, even though related “in signs and figures” rather than in letters and words. As for the other books he so neatly listed, however, their content was implicitly idolatrous and thereby false.

These other books, the ones Motolinia described but then so quickly—and, we might imagine, warily—passed over, were the dangerous books. They were the books that contained the tenets of religious ideology, against which Motolinia and his colleagues had been battling so arduously for many years. They told about the invisible world: not the secular world of rulers, dynasties, armies, and tribute but the world of divine or spirit beings, supernaturals, and cosmic forces. Among other things, these were books of fate. As Motolinia described them, these books treated divination, feasts and rituals, “dreams and illusions,” and spiritual preparations accompanying birth and marriage. Although he divided the books topically into four separate genres, we know from existing versions that the different topics could be, and were, intermixed and gathered in single volumes.

These dangerous books were first and foremost about cycles of time and the spiritual meanings that adhere to time. For the Aztecs and their neighbors, time created the nexus that connected humans to their fates and the gods. And time was particularly understood in terms first of days and then of larger sets and cycles of days. These books segmented the flow of time into the days and their cycles and explained which mantic forces were at work there. These were the books that articulated the sacred calendar: not the count of fifty-two years or the annual civil calendar of 365 days that marked the seasons and agricultural cycles, but the shorter, divinatory cycle of 260 days that governed all the details of life and extended its reach even into death itself. Called *tonalamatl* (meaning “book of days”), they presented cycles of divinatory time as interlocking armatures to which meanings are attached. In this way the books not only articulated specific quantities of time but showed their qualities as well. They explained what supernatural forces influence each unit and each cycle.

Principally they were books of divination. They described and thereby fixed the fate of newborns and in-

structed them how to live as they matured. They later guided them in choosing marriage partners and fixing auspicious wedding dates. These divinatory books outlined what kinds of rituals should be performed and when, in order to suppress a dire fate or nurture a positive one. They aided in the interpretation of dreams, helping to indicate the path of proper action. The Mexicans looked to these books as guides for correct living. The sons of the Aztec lords who helped friar Bernardino de Sahagún (1953–1982, bk. 10:191) in his great ethnographic project described these and other painted books as the guides, rules, models, standards, and even torches that illuminated the way for the Aztec people.

The Dominican friar Diego Durán often complained in exasperation at the Aztecs’ continued reliance on the divinatory books, even fifty years after the conquest. He decried the Nahuas’ habit of not harvesting a field, for example, even though it was dry and ripe and in danger of deterioration, until the diviner ordered it. Specifically, he recalled one instance when the people all rushed out of church as soon as the diviner said the crop was ready to be harvested:

I dare to swear to these things because in church I myself have heard the public announcement, all the people being present, that the time of the harvest has come. They all rush off to the fields with such haste that neither young nor old remain behind. They could have gathered the crop earlier, at their leisure; but since the old sorcerer found in his book or almanac that the day had come, he proclaimed it to the people, and they went off in great speed. (Durán 1971:397)

As divinatory manuals, these books of fate are fundamentally different from the painted histories. They point to the future rather than the past. Unlike history books, which record actions and actors of an earlier time and describe how things were (or are understood to have been), the divinatory books concern themselves with the way things now are in a present that continues into the future; they yield potentials, for they are windows into the future that allow one to see dangers and successes ahead. They give access to a world that, in Alfred Gell’s (1992:303) words, “has enacted itself, and will enact itself, beyond our direct experience and without our intervention.” In books such as these Moctezuma’s diviners sought to understand the arrival of the

Spaniards and the subsequent destruction of all that the Aztecs held dear.

These divinatory books also have a universal quality to them, especially when compared to the histories, tribute lists, and other secular documents. Because they usually lack references to specific locations and dates, and they never include named humans, they float unanchored in space and time. They do not pertain only to one place, and they do not exert local loyalties. Rather they concern themselves with universals that are potentially applicable to all people. An Aztec merchant preparing to leave Tlatelolco on a long journey, for example, would be guided by one of these books to set out on an auspicious day (such as 1 Serpent). His Mixtec colleague who was preparing to depart from distant Tlaxtepec, on the Oaxaca-Veracruz border, would be guided by a similar book, one that perhaps contained the same almanac; and he, too, might wait for the day 1 Serpent or another equally auspicious. Five hundred years later, the divinatory books still serve as portals to that invisible world of days, supernaturals, and signs. Those who believe in the ancient Mexican divinatory system can still be guided by these same books.

The books stand for an entire body of indigenous knowledge, one that embraces both science and philosophy. When the *mestizo* historian Fernando de Alva Ixtlilxochitl (1985, 1:527) described the books of his forefathers, he spoke of histories, genealogies, and such practical, secular works as land documents, but he also mentioned books of “the [religious] laws, rites, and ceremonies,” the religious calendars, and the books that embodied “all the sciences that they knew and understood.” Besides tracking time and its cycles, these books also described the very structure and working of the cosmos. By explaining the temporal and supernatural forces that shaped and governed the world as it was then known, they articulated its universal laws. Their goal was to express the unrepresentable, to provide through structured figuration an understanding of invisible forces and principles. These divinatory and religious books were thus equivalent to our books of philosophy, theoretical physics, astronomy, and astrology.¹ In terms of the rituals they described, the books functioned like Christian devotionals, catechisms, and other books of prayer. It is no wonder that Motolinia chose not to elaborate on their content and importance for the Aztecs.

The knowledge that the books encode is largely relational. It concerns systems of correspondence that obtain between units and cycles of time and the meanings that adhere to them. In this they are not unlike the “systems of correspondence” described by Manfred Porkert (1974:2) for Chinese medicine, where every part is largely defined by its relation to the others and to the whole. This knowledge is of a topological rather than a topographical character, for (as per Gunther Kress and Theo van Leeuwen 1996:101) it is not concerned with physical spatial relations or actual locations but with “the logical relations between participants, the way in which participants are connected to each other (whether they have common boundaries, or are partially or wholly included in each other, in which sequence they are connected, etc.) but not the actual physical size of the participants or their distance from each other.” It is knowledge that concerns itself with complex structures and the relationships among variables. The goal of the divinatory books is therefore to represent graphically the principles by which the sacred calendar, on the one hand, and the rest of the cosmos, on the other, operate and to show the links and associations between these spheres.

This makes the divinatory codices fundamentally different from the historical manuscripts, which tell stories and track events over time and thus have a linear structure to them. Excepting some specific passages (e.g., the eighteen-page narrative section in the Codex Borgia), the divinatory codices do not follow a story or narrative and thus have no need for a continuing thread to string the parts together in a temporal or causal sequence. Instead they gather information into discrete and largely independent units: almanacs and protocols (prescriptions) for rituals. Each almanac or protocol functions independently of the others. Each is governed by its own semantic properties, employing its own internal structure for putting the images into meaningful association with each other. Within an almanac, units may often be linked as a series or even a sequence, but such a sequence does not then extend to the units of other almanacs. Instead the almanacs all stand as autonomous but complementary entities. This makes the divinatory codices books of many separate parts that are intended to be consulted individually. A user does not “read” one of these books from beginning to end, but instead searches selectively among the vari-

ous almanacs and protocols for information relevant to a particular situation.

This being said, the extant divinatory books do reveal a loose canonical sequence for the almanacs they contain. As explained in the conclusion of Chapter 5, certain kinds of almanacs tend to open and close the books, and other almanacs tend to cluster together. Still, the meaning contained within each almanac functions independently of the others.

The graphic vocabulary of these sacred books is esoteric and extremely difficult to decipher. Pertaining as it does to the supernatural and invisible realm, it has all the richness and polyvalent qualities of any religious language. Like religious languages that are spoken (Keane 1997), the images in the divinatory codices bring forth the presence and actions of beings and essences that are not otherwise knowable to the senses, and they do this in highly marked ways. We can understand this graphic, religious language as an interdependent but parallel discourse to the divine and sacred speech of the Mexican priests and diviners.

Among the Aztecs, this sacred speech—*nahuallatolli* or “speech of the sorcerers”—was used by the priests and diviners to speak to and about the gods and spiritual forces (López Austin 1967b; Jansen 1985). It was a rich and complex manner of speaking, one that approached meaning obliquely and through metaphor. This was an articulation that seemed superficially to obscure and hide rather than clarify but that revealed by its indirectness the fuller qualities of an essence. Thus, something as ordinary and prosaic as “water” could be conjured as “she of the jade skirt,” “her blouse is jade,” “the mistress of jade,” “her skirt is dark green, her blouse is dark green,” “the dark green woman,” “the white woman,” “the white priest,” “the brilliant priest” (López Austin 1967b:7).

According to Francisco de Burgoa (1989, 1:331), the Mixtec elite similarly commanded an esoteric and elaborate speech for matters relating to their gods and sacrifices, a speech that was equally rich with metaphors and occult phrases (Jansen 1985:7). This speech employed its own special language, which Evangelina Arana (1960) and Maarten Jansen (1985:8–11) have called *iya* (“lord”). *Iya* appears to have involved normal Mixtec and a language related to Cuicatec, the language of the region near the town of Apoala, the mythical place of origin for the Mixtec dynasties. In Mixtec sacred

speech, *iya* thus seems to be an archaism, a reference to the distant and mythological past.

Another manifestation of this sacred language of the Mixtecs is the special vocabulary used to vocalize the day signs and the day numbers painted in their codices. The glosses written in Mixtec on postconquest pictorials do not name the day signs and numbers in everyday Mixtec but instead use a different vocabulary with many variations in the words for each term, a vocabulary thought to be an archaic form of Mixtec (Dahlgren 1954:367–370; Caso 1956:488–491; Smith 1973a:23–27). The Mixes are additionally known to have had a special vocabulary for the temporal elements of their sacred calendar (Lipp 1982:203), although there is no evidence that the Aztecs also had one.

The divinatory and religious codices, as in *nahuallatolli* and *iya*, rarely state anything plainly. They are indirect, they obscure, they bring the past to bear by archaizing. The graphic images hold and release their meaning through euphemism, metonym, and metaphor; they show by analogy. Meanings themselves are layered. This recalls C. S. Jung’s distinction between a sign and a symbol, where “a sign is an analogous or abbreviated expression of a *known* thing. But a symbol is always the best possible expression of a relatively *unknown* fact, a fact, however, which is none the less recognized or postulated as existing.”² The distinction is between something whose totality can be conveyed by a single image (a sign) and something whose totality can perhaps never be adequately expressed (a symbol). The ancient Mexican calendar priests and diviners spent years of study in the temple schools learning to decipher, interpret, and give voice to these visual messages. We thus should not be surprised that today the books yield their secrets to us very reluctantly.

Surviving Corpus

In the years before Europeans came to Mexican shores, divinatory books were everywhere. Since all children had to have their fates read shortly after birth, and since most significant events required a diviner’s opinion, such books must have been common in cities, towns, and villages throughout the land, stored in temple repositories or in the homes of the calendar priests themselves. They were brought out and consulted daily

or weekly. Some were glorious masterpieces of the painter's art, painted and used by the highest elites of indigenous society; others were inelegant and poorly crafted things, the products of provincial minds and unskilled hands. Well made or not, almost all the divinatory codices were gathered up and burned by the friars soon after the conquest or shortly fell into disuse and eventual decay. These were the books that the evangelizing friars targeted. These were the ones sought out and thrown into the great bonfires along with the indigenous cult images.³ The destruction of the books was so complete in the years after the conquest that several friars later decried their loss, deploring the obliteration of so much basic information about Aztec religion. Writing in 1581, Diego Durán (1971: 55), observant enemy of hidden idolatries, lamented:

Those who with fervent zeal (though with little prudence) in the beginning burned and destroyed all the ancient Indian pictographic documents were mistaken. They left us without a light to guide us—to the point that the Indians worship idols in our presence, and we understand nothing of what goes on in their dances, in their market places, in their bathhouses, in the songs they chant (when they lament their ancient gods and lords), in their repasts and banquets; these things mean nothing to us. Heathenism and idolatry are present everywhere: in sowing, in reaping, in storing grain, even in plowing the earth and in building houses; in wakes and funerals, in weddings and births. . . .

Only a very few divinatory books have survived today. It is a wonder that any did. Most left Mexico during or soon after the conquest, shipped to Europe as curiosities, and this seems to have been what spared them; others survived in Mexico in personal and official archives.

From central Mexico there remains only a small corpus of nine books painted in the indigenous tradition on native materials and several colonial copies painted on European paper. Seven are documents of hide that reflect traditions shared within the greater Mixteca-Puebla-Tlaxcala region. These are the “Borgia Group codices,” so named for their resemblance to the Codex Borgia: the Codices Borgia, Cospi, Fejérváry-Mayer, Laud, Porfirio Díaz Reverse, Vaticanus B, and Aubin No. 20 (see the Appendix). All are screenfold books,

being composed of a long strip folded like an accordion or screen into pages, except Aubin No. 20, which is a hide sheet. All are undoubtedly Precolumbian except for the Porfirio Díaz Reverse, which occupies ten pages on the back of a history known to have been painted decades after the conquest. In addition to its divinatory content, the Borgia Codex also contains an eighteen-page cosmogony, painted as a narrative. The Cospi, Fejérváry-Mayer, and Laud contain protocols for rituals.

The Aztec tradition of central Mexico is represented by two screenfold books of bark paper, the Codex Borbonicus and Tonalamatl Aubin. Although both seem to have been created after the conquest, they are painted almost fully in the native style. In addition to its two divinatory almanacs, the Borbonicus also includes a depiction of the monthly feasts and a partial annals history.⁴

This corpus of primary sources is amplified by several copies of earlier lost divinatory almanacs, the copies executed under Spanish patronage and incorporated into colonial encyclopedias of native culture. These almanacs are included in the Codices Tudela and Telleriano-Remensis and its copy the Vaticanus A (or Ríos), all painted on European paper in the middle or second half of the sixteenth century. These colonial pictorials most closely reflect the Aztec tradition of the Borbonicus and Tonalamatl Aubin, and they contain written texts and glosses that explain the imagery in varying degrees of detail. Our knowledge of the indigenous calendar and divinatory system is also augmented by the written word of several other chroniclers, among them Francisco Cervantes de Salazar, Juan de Cordova, Diego Durán, Bernardino de Sahagún, and Jacinto de la Serna.⁵ Sahagún (1953–1982, bk. 4, 1997: 169–174), who decried the divinatory cycle as not being a calendar at all but the work of the devil, ironically recorded the most extensive reading we have of a 260-day almanac. This relatively small corpus gives us a taste of the larger genre.

It would be hard to overestimate the importance of these few surviving divinatory codices. Together they contain some 102 pictorial almanacs, with many almanacs recurring in multiple manuscripts. (Their contents are described in the Appendix, which also includes structural diagrams of the Borgia Group manuscripts.) These books also include some of the most visually

complex and exquisitely executed manuscripts of the entire Mexican tradition. The Codex Borgia, for example, is often held up as the finest exemplar of the wide-ranging Mixteca-Puebla Horizon style, and the Codex Borbonicus is the great masterpiece of Aztec painting. The Fejérváry-Mayer and Laud are crafted with precision and balance that are unparalleled in all the manuscript corpus. Also, these codices are our best portal into the religious ideology and cosmology of the Aztecs, Mixtecs, and their neighbors. They are as close as we are likely to get to the spiritual world of ancient Mexico.

Editions and Modern Interpreters

Serious scholarly study of the divinatory manuscripts can be traced back to the latter part of the eighteenth century, a time when intellectuals in Mexico and Europe were beginning to take a more active interest in the ancient Mexican past. In Italy the principal figures were the exiled Mexican Jesuits Francisco Clavijero and José Fabrega. Clavijero came to know the Codex Cospi when he lived in Bologna, although he mentioned it only summarily in his *Storia antica del Messico* (1780–1781, 2:189). Fabrega, however, focused his efforts more fully on the codices themselves and wrote the pioneering commentary on the Codex Borgia. Working under the patronage of the erudite and well-connected Cardinal Stefano Borgia in the Vatican Library, he had access not only to the Borgia but also to the Vaticanus B, the early colonial Vaticanus A/Ríos, and a copy of the Cospi. In order to explain the Borgia *tonalamatl*, he drew heavily on the extensive Italian glosses in the Vaticanus A/Ríos. Fabrega also briefly reviewed and brought further scholarly attention to nearly a dozen other religious and historical codices that were in European collections. Although Fabrega's commentary was not published until 1899, it was widely consulted by Americanists during and after his lifetime: for example, Antonio León y Gama in Mexico and Abbé Brasseur de Bourbourg in France owned copies; Alexander von Humboldt and Lord Kingsborough (Edward King) knew and cited it.⁶ Humboldt (1810) made several of these pictorials known to a broader international audience when he published drawings of selected pages of the Bor-

gia, Vaticanus A/Ríos, Vaticanus B, and Telleriano-Remensis in his *Vues des cordillères et monumens des peuples indigènes de l'Amérique*.

It was Lord Kingsborough, however, who changed the way the manuscripts would be studied when he published most of the codices in their entirety. The first three volumes of his monumental, nine-volume *Antiquities of Mexico* (1831–1848) contain lithographic plates of drawings of sixteen pictorial codices, including seven of the religious manuscripts: the Telleriano-Remensis, Vaticanus A/Ríos, Laud, Cospi, Borgia, Fejérváry-Mayer, and Vaticanus B; volumes five and six provide transcriptions and English translations of the texts of the Telleriano-Remensis and Vaticanus A/Ríos.⁷ Although the individual manuscript pages appear without reading guides or specific commentary, and occasionally occur in a broken and reverse sequence, Kingsborough's opus meant that scholars no longer had to rely solely on their personal notes and copies of the originals but now had working copies of the images and texts. Relatively little progress was made in interpreting the Mexican religious codices, however, until later in the century.

The breakthrough came in 1887, with the research of the German Americanist Eduard Seler. Seler recognized the close affiliation of several divinatory codices and, in a landmark article, defined what he called the "Codex Borgia Group" and explained its religious and divinatory nature.⁸ This article established a firm basis for the analyses that would follow in the next two decades. Seler (1890) also contributed a long article that explained the Tonalamatl Aubin and the other 260-day calendrical manuscripts from central Mexico.

The next turning point in codex study came in the 1890s, when the wealthy American Joseph Florimond, better known by his papal title the Duke of Loubat, decided to finance the publication of Mexican codices in chromolithography, with introductions and commentaries by the most eminent scholars. Loubat's interest and resources effectively ushered in the great age of facsimile publication and study. Seven major codices appeared under his auspices between 1896 and 1904: the Vaticanus B (1896), Borgia (1898), Cospi (1898), Telleriano-Remensis (1899), Vaticanus A/Ríos (1900), Tonalamatl Aubin (1900–1901), and Fejérváry-Mayer (1901), as well as the Magliabechiano (1904), a mid-sixteenth-century cultural encyclopedia.⁹ Loubat's fac-

similes faithfully retain the screenfold format of the originals or otherwise follow accurately the structure of the codices, and the chromolithographic technique yielded excellent reproductions of the forms, imagery, and texts of the originals. In these two respects the Duke of Loubat facsimiles are greatly superior to the earlier Kingsborough reproductions.

At about the same time, four other divinatory manuscripts appeared in print. The manuscript Aubin No. 20 (Fonds mexicain 20) was published in photographic facsimile by Eugène Boban in the catalogue of the Aubin-Goupil collection (1891). The Porfirio Díaz was reproduced in color lithography with other manuscripts by Alfredo Chavero under the auspices of the Junta Colombino in Mexico (1892). And the Borbonicus was issued in facsimile by Ernest Théodore Hamy (1899a) in Paris. By 1901 almost all the divinatory codices had appeared in facsimile.¹⁰

Most of the Loubat facsimiles were either published with commentaries or accompanied by short introductions, with fuller commentaries published separately. Franz Ehrle, prefect at the Vatican, oversaw the Vatican codices (Vaticanus B, Borgia, and Vaticanus A/Ríos) and authored the commentary on the Vaticanus A/Ríos, published with the facsimile (Ehrle 1896, 1898, 1900). In Paris Ernest Théodore Hamy, president of the Société des Américanistes, published a brief commentary with his edition of the Borbonicus and wrote a fuller study (with transcriptions of the texts) of the Telleriano-Remensis (Hamy 1899a, 1899b). Francisco del Paso y Troncoso, the director of the Mexican National Museum, who had been investigating manuscripts in Europe since 1892, wrote short introductions that accompanied the Cospi and Vaticanus B facsimiles and provided a separate, fuller commentary on the Borbonicus (Paso y Troncoso 1896, 1898a, 1898b).

It was Eduard Seler, however, whose association with the Duke of Loubat bore the most fruit. Seler had already been studying the religious codices for some time. With Loubat's support, he elaborated his earlier 1887 and 1890 analyses to create what John Glass (1975b:99) has called "the fundamental body of interpretation" for the Borgia Group manuscripts. Between 1900 and 1909 Seler published commentaries on four of the divinatory codices: the Tonalamatl Aubin, Fejérváry-Mayer, Vaticanus B, and Borgia. As H. B. Nicholson (1973:353) notes:

These famous monographs, taken together, probably represent Seler's most significant single contribution to Mesoamerican studies, and on them rests his greatest reputation. Although each was ostensibly devoted to an analysis of a single pictorial specimen, to aid his analyses Seler employed a broad-ranging comparative technique with the result that they also constituted fairly thorough interpretations of many other pieces as well (especially Telleriano-Remensis/Vaticanus A, Laud, Cospi . . . , Borbonicus, and Magliabechiano), nor were relevant Maya area data omitted.

The greatest achievement of Seler's commentaries is his descriptive analysis and iconographic identification of the imagery. He described, identified, and interpreted just about every image in the codices. Most of Seler's specific readings of individual iconographic details have been accepted by subsequent scholars and remain fundamental to all later research. His deeper or metaphoric readings of the images and his interpretations of whole almanacs, however, are more problematic (Nicholson 1973:352–359). They can sometimes be as valuable as his surface readings but can also be extremely speculative or simply erroneous. The problem has arisen when later scholars have simply accepted Seler's interpretations because of the weight of his authority.

Seler was influenced by then-current paradigms for understanding ancient religions from an astral perspective; he also looked to contemporaneous interpretations of Babylonian religion to find parallels in Mesoamerica. Following Ernst Förstemann's identification of the Venus table in the Dresden Codex, Seler correctly recognized the Venus almanacs in the Borgia, Cospi, and Vaticanus B; but he then began to seek, and "find," Venus references in other almanacs when they were not actually in evidence. Ferdinand Anders, Maarten Jansen, and Gambina Aurora Pérez Jiménez (1994:64) point out that the epic journey of the Babylonian goddess Ishtar to the underworld supplied Seler with a model for interpreting the ritual section of the Borgia as Quetzalcoatl's own descent into the underworld, which he read as an allegory for the invisible periods of Venus. Seler used astronomy as the interpretive key to the almanacs, sometimes without full regard for the imagery itself (Anders, Jansen, and Pérez Jiménez 1994:62–65). Thus, investigators who use Seler's com-

mentaries—and everyone must—should be aware of his overarching astronomical paradigm and be prepared to screen many of his interpretations.¹¹

The much-needed corrective to Seler's approach came in 1961, with Karl Anton Nowotny's *Tlacuilolli*, which synthetically presented the content of all members of the Borgia Group along with the related Aztec *tonalamatls*. Nowotny was the first since Seler's 1887 article to focus on the religious-divinatory codices as a single corpus. He established the mantic or prophetic, as opposed to the astronomical, function of the almanacs and recognized that most of the almanacs referred to the patrons and symbolic associations of various periods of time. Often he relied on Seler's fundamental iconographic identifications; but in important departures, he reinterpreted the narrative passage of Borgia 29–46 as a series of rituals (not as the passage of Venus through the heavens and underworld), and he recognized the rituals of counted and bundled offerings that appear in the Cospi, Laud, and Fejérváry-Mayer. Shunning the fantastic overinterpretation that he saw in Seler and others, Nowotny reanalyzed the almanacs not according to themes (astronomical or otherwise) but in terms of their calendrical structure. This approach allowed him to identify and compare similarities and parallels in almanacs from different manuscripts. It also clarified the structure of the almanacs and provided a firm foundation for new interpretations (Anders, Jansen, and Pérez Jiménez 1994: 71).

Nowotny's contribution has not received the attention it deserves, however, because *Tlacuilolli* was written in German, which is spoken by fewer and fewer Americanists; moreover, its conceptual style is difficult to comprehend (Anders, Jansen, and Pérez Jiménez 1994: 71). Nowotny organized his presentation not as a well-developed argument but as a series of captions, plates, and a catalogue, which tends to fragment the material rather than highlight the most significant features. A recent English translation of *Tlacuilolli* (2005) by George A. Everett, Jr., and Edward B. Sisson will undoubtedly make Nowotny's views and approaches better known.

Despite Nowotny's "corrections" to what he saw as the interpretive excesses of Seler, Seler's perspective continued to find an increasing audience. While *Tlacuilolli* was largely unread outside of Europe, Seler's pivotal commentary on the Codex Borgia was translated

into Spanish and published with a reprint of the Loubat facsimile in Mexico and Buenos Aires in 1963. By virtue of its accessibility, this commentary has been one of the principal ingresses into the Borgia Group.

Between 1964 and 1967 José Corona Núñez issued the *Antigüedades de México, basadas en la recopilación de Lord Kingsborough*, which reproduces photographically a number of the codices originally published by Kingsborough, including the Cospi, Fejérváry-Mayer, Laud, Telleriano-Remensis, and Vaticanus A/Ríos.¹² Although the quality of the color photography and/or printing varies greatly from manuscript to manuscript, the Cospi and Laud reproductions are particularly outstanding. Corona Núñez also included his own page-by-page commentaries (which were largely based on Seler), transcriptions of the texts of the Telleriano-Remensis, translations of the Italian texts of the Vaticanus A/Ríos, and Kingsborough's own outdated notes on these documents. The commentaries in the *Antigüedades de México* may not themselves have advanced scholarship appreciably, for they relied extensively on earlier work; but the publication was significant in presenting the codices to a much wider audience. Few had access to the rare Kingsborough and Loubat publications.

The major difficulty with this edition, as with almost all editions that publish the pages of indigenous codices in separate plates (e.g., Kingsborough and the Spanish edition of Seler's Borgia study), is that the reader cannot see how the individual pages are joined together and how these long screenfold manuscripts should be read along the length of the strip; sequence can be fragmented and lost. This is especially problematic with manuscripts, like the Borgia, that read from right to left and had their pages thus numbered. Since Western readers traditionally work from left to right, the publishers reproduced "Plate 1" as the first plate rather than the last and continued from left to right with the plates in backward sequence; this means that the connections between adjacent pages are totally lost.¹³ The page-by-page presentation also encourages the reader to comprehend each page as the principal unit of organization, rather than to understand how an individual almanac may run along the top or bottom register for several pages. True facsimiles that preserve the format of the original thus become crucial for study of the screenfolds.

The next great age of facsimile publication arrived concurrently with Corona Núñez's edition. Consciously following in the footsteps of the Duke of Loubat, the Austrian scholar Ferdinand Anders and the Akademische Druck- u. Verlagsanstalt (ADEVA) in Graz, Austria, initiated a program to offer the important Mesoamerican pictorials in high-quality photographic facsimile, each as a separate publication. Anders himself photographed the originals to maintain consistent excellence. Between 1966 and 1979, the ADEVA issued the Laud, Cospi, Fejérváry-Mayer, Vaticanus B, Borbonicus, Borgia, and Vaticanus A/Ríos, a number of other Mexican codices, and the three major Maya books. The ADEVA policy was to retain the manuscript's original format and size, to reproduce the manuscript as accurately as possible in every way, and to limit accompanying material to an introductory text that describes the manuscript's physical properties and history. The goal was to provide the highest quality of reproduction but leave interpretation and reading to others. These facsimiles soon became the mainstay of current scholarship on the divinatory codices.

With the quincentenary of Christopher Columbus's voyage to America, the ADEVA joined with the Fondo de Cultura Económica in Mexico and the Sociedad Estatal Quinto Centenario in Spain to reissue the ADEVA facsimiles, this time accompanied by new commentaries written by Ferdinand Anders, Maarten Jansen, and other specialists who joined Anders and Jansen as co-authors on different volumes relevant to their expertise. Between 1991 and 1996 the Borbonicus, Borgia, Cospi, Fejérváry-Mayer, Laud, Vaticanus A, and Vaticanus B appeared, along with several other Mexican codices. Each commentary on the divinatory books opens with one or more major essays that treat larger themes pertinent to most of the documents, such as the structure of the codices, provenience, divination, and the divine and human in Mesoamerican religion; the Laud volume also includes drawings and a reading of the reverse of the Porfirio Díaz (renamed the Codex of Tututepetongo).

As a body of scholarship, the effort is impressive. The authors drew on the best of previous scholarship, balancing Seler's iconographic identifications with Nowotny's clarity and structural emphasis; but they also reached back afresh to the sixteenth-century sources—the Magliabechiano Group, the Telleriano-Remensis

and Vaticanus A/Ríos, and chroniclers such as Sahagún, Motolinia, Durán, and Hernando Ruiz de Alarcón—and brought in contemporary ethnographic research on living Mesoamerican religious traditions. The result is the latest in scholarly understanding of the individual manuscripts and of the divinatory group as a genre. Diagrams help the reader understand the structure of almanacs and manuscripts alike.

The new commentaries do not replace earlier studies, however, for the actual discussions of each scene or each almanac are more literary than analytic. Instead of providing a detailed and referenced analysis of the material, they give a descriptive reading, one that identifies the imagery and assigns meaning to the whole but is without the usual supporting evidence and arguments. As the authors admit, they “offer a preliminary reading, although limited and speculative” (Anders, Jansen, and Reyes García 1993:69). I often agree with their readings but do not always. The reader is hindered in judging the veracity of the readings because the authors do not usually give their reasons for interpreting the imagery and message in a particular way. Therefore, serious students will still want to work through the almanacs themselves, building on the work of Seler, Nowotny, Anders, Jansen, and others and drawing on the chroniclers and modern ethnography; these new readings may be the latest word on the almanacs, but they were never intended to be the last word. For more casual readers, however, the readings bring the imagery to life in a particularly accessible and vibrant way.

Several other facsimiles and commentaries fill out the published corpus. A 1992 edition of the Cospi edited by Laura Laurencich Minelli includes a number of excellent essays on the manuscript's content, history, and physical properties, as well as the most accurate photographic reproduction of each page. In 1995 the University of Texas Press published an outstanding photographic facsimile of the Telleriano-Remensis, with an important, full commentary by Eloise Quiñones Keber.¹⁴ Quiñones Keber's commentary represents the state of our understanding of the complex document and is a good introduction to the genres of manuscripts that compose its sections (monthly feasts, *tonalamatl*, annals history); it is automatically now the standard reference for the codex. The superb 2002 facsimile of the Codex Tudela with a detailed commentary by Juan José Batalla Rosado replaces the 1980 edition

by José Tudela de la Orden, although it is so expensive that only a few libraries may acquire it.

Another enterprise entirely (and one that has become increasingly important to studies of the divinatory codices) is the paperback version of the Borgia issued in 1993 by Dover Publications. The commentary by Bruce Byland is quite good and up to date but relatively brief, for the focus of the book is the facsimile, which reproduces a hand-painted restoration of the Borgia created by artists Gisele Díaz and Alan Rodgers. Their aim was to restore the Borgia as accurately as possible to its pristine condition; although specialists will find errors in some places where images were reconstructed, overall Díaz, Rodgers, and Byland have succeeded admirably. They have given the field a useful version of the Borgia that is so inexpensive that non-specialists and members of the general public can easily afford it. Specialists can buy several copies and make notes and amendments directly on the images. The affordable price and Dover's wide distribution mean that the Borgia will remain the best known and most frequently consulted of all the divinatory codices and that more and more amateurs and professionals will develop interests in this genre.

Guides for Living

My own approach to the divinatory codices is to examine and present the genre as a whole. My goal has been to determine the canons that govern the production and interpretation of these books. This involves understanding the graphic vocabulary for presenting the calendrical units and prophetic forces as well as recognizing the organizational structures that bring these two elements into association. Thus, I am less concerned with reaching a correct and exhaustive reading of a single almanac or with creating a prognostication based on the reading of several almanacs than I am with explicating the general principles by which the almanacs operate. In this respect, this present study is closer to the structural and calendrical approach taken by Nowotny than to the dense iconographic exposés of Seler or the verbal readings of Anders, Jansen, and their colleagues. Although I do explain the iconography and mantic properties of a number of almanacs in some detail, readers should consult Seler as well as Anders

et al. for the details of other almanacs, passages, and supernaturals.

Beginning with the function and social context of the documents, Chapter 2 examines how the Mexicans segmented time into meaningful units that became the foundation of their divinatory system. It explains the sacred cycle of 260 days, as well as the 365-day "solar" cycle and the greater 52-year cycle that links the two. The chapter introduces the diviners and calendar priests, whom Sahagún called "soothsayers," who owned and interpreted the books of fate. It explains how the books served the Mexican peoples as guides for everyday living and the correct performance of ceremonies large and small.

Chapter 3 presents the graphic vocabulary of the almanacs. It shows how individual units of time are pictured or expressed graphically: how signs, numbers, and "spacers" are to be read. This chapter presents the major actors (supernatural and other), actions, objects, and symbols that represent or otherwise visually convey prophetic forces. Many images are easily identifiable on the surface, and their meanings are well known, but ultimately the divinatory codices employ a challenging language of symbol and metaphor.

It is the graphic structure of the almanacs that brings the calendrical units and prophetic images into meaningful association. Chapter 4 explains the general rules that guide the reading of the books and their almanacs. It shows how almost all the almanacs are structurally arranged as lists, tables, or diagrams, although blendings of these graphic structures make for presentational richness.

The almanacs themselves are explained in Chapter 5. They are organized according to their uses (rather than according to their structures) into three basic types: multipurpose, directional, and topical. Probably most existing almanacs are multipurpose ones, being relevant to almost any action or situation; they involve either the basic count of twenty day signs or the entire 260-day count as a whole. When these multipurpose almanacs treat the 260-day cycle, they often divide it into subcycles of twenty thirteen-day periods (the *trecenas*), which in the most elaborate versions are accompanied by the complementary series of nine Lords of the Night and the thirteen Volatiles (flying creatures) and Day Lords. These elaborated *trecena* almanacs are characteristic of the Aztec tradition. Directional alma-

nacs present the mantic features of the cardinal directions, and sometimes the center (as a fifth direction); they often have the generalized applicability of multi-purpose almanacs but focus on the prophetic qualities of the directions. In contrast, topical almanacs are more narrowly focused on a single sphere or activity; the major ones concern marriage, birth, travel, rain and agriculture, and the planet Venus. We see great variation in the structure and complexity of the divinatory almanacs: some almanacs focus on a very limited amount of information, whereas others elaborate and embellish their prophetic message. The Appendix summarizes the divinatory content of the almanacs in each manuscript.

Chapter 6 concerns the protocols or pictorial instructions that guide humans in the performance of ritual. Many of the almanacs, and especially the more elaborate and embellished ones, contain cues for the observance of proper ritual; they tell of blood sacrifices that should be made, offerings that must be given, and rites that must be performed. In addition, three codices—the Cospi, Fejérváry-Mayer, and Laud—also devote whole pages to rituals that involve great quantities of carefully counted offerings. These protocols, which are independent of the almanacs, specify the precise kind, number, and arrangement of offerings to be made.

The great narrative passage in the Borgia, which has been the subject of many differing opinions and much controversy, is the subject of Chapter 7. Here I interpret it neither as the passage of Venus through the heavens and underworld (as per Seler) nor as a series of separate rituals (as per Nowotny and others) but as a cosmic narrative of creation. This Mexican cosmogony begins with the first explosion of power and ends with the drilling of the first new fire. In between we see the creation of cosmic essences, the birth of gods and humankind, the bringing of maize, and the first human sacrifice. Quetzalcoatl and Tezcatlipoca play major roles in the narrative, as they do in so many cosmogonies.

The other controversy surrounds the provenience of the divinatory manuscripts (and especially those of the Borgia Group), which is discussed in Chapter 8. There is considerable evidence that the manuscripts of the Borgia Group come from different locales, although all generally within the greater Tlaxcala-Puebla-Mixtec zone. What is so striking is the near identity of their

content as well as the similarities they share with the manuscripts of the Aztec tradition. As explained in Chapter 9, a single great religious and divinatory system was spread across much of central Mexico, such that an Aztec priest could probably read and use the Codex Borgia or Fejérváry-Mayer, although he might think it oddly arranged. There was by no means universal agreement in every particular, but the diverse locations of the surviving divinatory books speak to a sacred ideology and iconographic system that was shared through most of central Mexico and extended in part even into the Maya region.

Maya divinatory codices are not included here, except for the few almanacs that were influenced by central Mexican practices. The Maya graphic system of communication, employing hieroglyphic texts that reference spoken language as well as pictorial imagery, was fundamentally different from that in central Mexico. Maya almanacs also have their own prophetic character and their own structures, which differ from the Mexican ones. Their iconographic and graphic challenges are distinctly their own.¹⁵

What we see in central Mexico is the presentation of time and its influences in a purely pictorial text. The Mexican divinatory codices communicate by way of a graphic code, a visual language that has its own vocabulary and particular semantic features. Because its subject matter potentially concerns all human action, the pictography of the divinatory codices is particularly rich in imagery and iconographic referents. Its graphic vocabulary is large and diverse. As often as not, meanings are encoded obliquely or indirectly, and the images work through metaphor and analogy. These visual statements, both metaphoric and direct, are then brought together with their calendrical units via a range of graphic structures that establish systems of correspondence. It is an understanding of these structures that allows us to enter the divinatory world of the ancient Mexicans.

A Note on Terminology

In this study I use the term “Mexican” to describe the books and divinatory tradition of central and southern Mexico west of the Isthmus of Tehuantepec, what might be called western Mesoamerica. Although some

of the Maya codices were likely created within what is now the nation state of Mexico, they participate in a distinctly Maya tradition centered east of Tehuantepec. I use the term “Aztec” expansively to refer to the Nahuatl-speaking peoples of central Mexico that shared a language and culture, including both those people within the Triple Alliance empire and their Tlaxcalan enemies.

Since the nineteenth century it has become traditional among Americanists to refer to the painted books of Mesoamerica as “codices.” In Europeanist scholarship (e.g., Weitzmann 1970), the term “codex” refers to the manner of a manuscript’s physical construction; it designates a book of individual leaves sewn and bound together along one side, as opposed to a roll or scroll. Americanists, however, use the term to reference pictorial content; it designates a manuscript whose content is significantly pictorial and painted in the native tradition, whether that manuscript is fully pictorial and executed as a screenfold strip of hide (e.g., Codex Borgia) or only partially pictorial and executed

on European paper and bound as a European book (e.g., Codex Telleriano-Remensis).

Most of these Mexican codices either bear the names of individuals who once owned them or are named for the city or library in which they are housed. The Codex Borgia, for example, once belonged to that great Italian family, and the Codex Fejérváry-Mayer was owned by Gabriel Fejérváry of Budapest before it was acquired by Joseph Mayer, a wealthy merchant of Liverpool. The Codices Vaticanus A and B, both in the Vatican Library along with the Borgia, are distinguished by numerical precedence: Vaticanus A is Codex Vatic. Lat. 3738, whereas B is 3773. Some scholars have recently assigned different names to some of the manuscripts in order to link them more closely with their place of origin or reflect their character.¹⁶ For the sake of consistency with most previous scholarship, and because attributions can change as more becomes known about a document, here I retain the traditional titles by which the manuscripts have been known.



Time, the Ritual Calendar, and Divination

Cycles of Time

In Mesoamerica everything that happened and everything that mattered was bound together and controlled by time. Time, as it was organized and codified in the pan-Mesoamerican calendrical system, characterized and qualified all actions and happenings, just as it ordered and linked the present to the past and future. Supernatural, natural, mythical, and historical events—whether important or trivial—were all shaped by this calendar. Supernatural beings came under its influence; the lives of humans were governed by it too.

The calendrical system was an armature for securing human beings and events within time: everyone and everything had its particular point of attachment and thus its place. Multiple, ongoing, and intermeshing cycles of the calendar created reoccurring junctures in time, so that each action and every human took its place in multiple cycles. As the cycles advanced, new junctures continually came to the fore until the cycles completed their span. Thereafter the same previous junctures reoccurred, already occupied by remembered past events but remaining open to present and future actions. These junctures tied those old events to the current ones and to those still to be.

This calendrical armature, far from being bare, was heavily fleshed with associations and qualities. All the temporal units bore multiple and layered associations with supernatural beings and with natural forces, entities, colors, areas of the cosmos, and understood truths. The units also received extra meanings shed continually by the events and beings linked to them. For example, because of the devastating and widespread famine of the year 1 Rabbit (1454) in central Mexico, 1 Rabbit years thereafter carried the taint of famine. The gods not only functioned within the structure of time: they were themselves attached to different units of time as “patrons” or governing forces and in this capacity actively influenced their units; in turn their own festivals were governed by those periods. Time was even joined with space, largely through the cardinal directions but also with intercardinal areas and the realms of the heavens and the underworld. Thus, the calendar was padded with meaning from the full range of Mesoamerican experience; it interconnected all aspects of cultural and natural life.¹

This conception of the calendar as a fundamental essence that underlies all being and doing is reflected in the Mesoamerican cosmogonies, which consistently say that the calendar was born near the beginning of creation. For the Maya, the Chilam Balam of Chu-

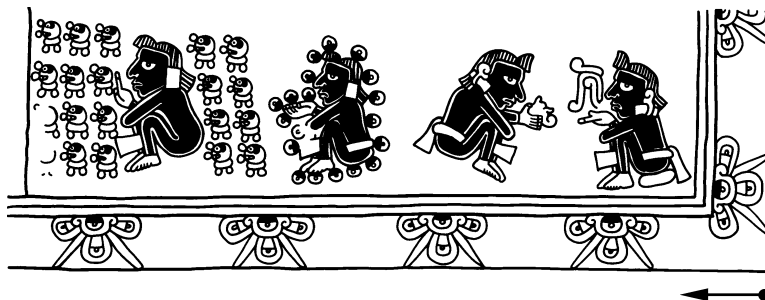


Fig. 1. The twenty nights and twenty days appear as the second couplet in the cosmogony of the Codex Vienna (52), following the initial couplet representing sacred speech or song and the offering of powdered tobacco. In the calendrical pair, the nights appear as “night eyes” or stars and the days as tiny circular faces embellished with disks. The sky band locates this in the heavens. Drawing by Heather Hurst.

mayel records that time, in the form of the day and the twenty-day period, was born “before the awakening of the world occurred,” before sky, earth, and water.² The painted cosmogony of the Codex Vienna, from Oaxaca, locates the creation of the twenty-day period second in the series of visual couplets that open the world. Still in the heavens at the dawn of creation, the first couplet represents ritual voice and offering. Next appear the twenty nights and twenty days of the day count, which come before the primordial couples and subsequent gods and before the land is laid down and water brought forth (Fig. 1). This same priority obtains generally in the Aztec realm. There the *Historia de los Mexicanos por sus pinturas* places the creation of the day count after the birth of the four primordial gods, children of the creator lord Tonacatecuhtli, but before the appearance of the lords of the underworld Mictlantecuehtli and Mictlancihuatl, and before the creation of the heavens, the great water, and the Cipactli crocodile from which the earth was fashioned. When the twenty-day count came into being, the world was still in half light before the final sun was born (Garibay 1979:25–27). In the pictorial cosmogony in the Codex Borgia, explained in Chapter 7, the day count is activated immediately after the first explosion of power (Fig. 105, Plate 12). Once created, the calendar ordered all that followed in the process of creation.

Archaeologically the first evidence for the Mesoamerican calendar comes in the fifth–sixth centuries BC in the form of calendrical signs and numerals carved in relief on stone monuments in Oaxaca (Caso 1965:931–933; Marcus 1976; Urcid 2001). The Maya dated the ori-

gin of their long count—canonically the beginning of time—to August 12, 3114 BC (Aveni 2001:138).

This calendrical system measured, marked, and regulated time in the manner of overlapping cycles. Fundamental was the count of twenty days, which meshed with another count of thirteen days to achieve the 260-day ritual cycle, called *tonalpohualli* or “day count” in Nahuatl. Within the *tonalpohualli*, secondary cycles (of 26, 40, 52, or 65 days, for example) gathered the units into larger groups. Onto these individual and collective units within the *tonalpohualli*, the divinatory system elaborated associations and portents, bringing meaning to each. This was the calendar that carried the burden of prognostication. A 365-day cycle or *xihuitl* (meaning “year”), basically a civil year, ran independently. Consisting of eighteen “months” of twenty days with an extra five days at the end, the *xihuitl* did not figure in fate reckonings.

Twenty-Day Count

The twenty-day count is the basic count. The Nahuatl word for twenty is simply *centpohualli* or “one count” (Seler 1900–1901:16; Sullivan 1988:151). This is the count of days enumerated in the half-light of creation according to the cosmogonies, and this is the count that carries most divinatory content. It is founded on the human body, representing the number of digits on hands and feet. In some Mayan dialects the word for twenty is *uinal*, which shares its root with the word for human, *uinic* (Seler 1900–1901:5–6; Thompson 1971:52, 143–144). When the Chilam Balam of

Chumayel recorded the appearance of the twenty-day count at the world's dawning, it was in the guise of human footprints that appeared on a road marking the passing of a man (Edmonson 1986:120–126).

Traces of the day-count's origin in humankind's four five-digit appendages (the hands and feet) remain in a secondary base of five. The Nahuatl word for five is *macuilli*, derived from *mai[tl]* (hand) and *cui* (to take) (Sullivan 1988:151). The ordinals 1 through 5, 10, and 15 have their distinct Nahuatl names, but the words for 6 through 9 are compounds that imply 5 + 1, 5 + 2, 5 + 3, and 5 + 4, and the words for 11–14 and 16–19 are unambiguously 10+ and 15+.³ In central Mexico, according to the chroniclers Sahagún (1953–1982, bk. 4:138) and Durán (1971:274), markets were held every five days; and Motolinia (1951:111) noted that market days came variously every five, thirteen, and twenty days.⁴ The secondary base of five is also reflected visually in several Mixtec and Borgia Group codices, where bars are used to record amounts of five and dots are used for singles.⁵ This use of bar and dot numbers is characteristic of Maya and Zapotec numerology, where it is ubiquitous. The Mixtecs and other central Mexicans occasionally used it also for recording amounts or quantities but never for calendrical numbers, preferring instead to paint all the numerical disks.⁶

The count of twenty days, as a fundamental unit of time, is clearly related to the vigesimal system Mesoamericans used for counting. It is not known, however, whether the sequence of twenty days or the counting system came first.

Despite the importance of twenty as the fundamental numerical base in Mesoamerica, the twenty individual days of this count are identified by signs rather than by numerals. The Aztecs, Mixtecs, and their Postclassic neighbors outside the Maya realm shared the same signs, which are figural and fairly realistic representations of things and occurrences.⁷ These signs include animals (Crocodile, Deer, etc.), plants (Reed, Flower, etc.), natural phenomena (Wind, Water, etc.), and a human construction (House) (Table 1). The day signs in Aztec and Borgia Group manuscripts are pictured in Figure 12. The origin of these specific day signs is unknown, but the Maya sequence of twenty days generally parallels the central Mexican sequence. The count always begins with Crocodile (Cipactli in Nahuatl) and ends with Flower (Xochitl in Nahuatl);

among the Maya it begins with Imix (Earth Monster) and ends with Ahau (Lord) (Thompson 1971:89, citing the Yucatec Maya terms).

Cycle of Thirteen Numerical Coefficients

Running concurrently with the count of twenty day-signs is a count of thirteen numbers representing a cycle of thirteen days. These numbers function more as pure cardinals or as ordinals than as amounts or quantities. They conceptually arrange and label discrete days in a set of thirteen, using the sequence 1 through 13 to reflect what Gary Urton has phrased “relations of precedence and succession.”⁸ The date 5 Flower, for example, does not represent five flowers, although Spanish friars occasionally translated it thus;⁹ instead it represents the juncture of day 5 (following 4 and preceding 6) in one cycle with the day sign Flower in another. Although the Maya always represented these calendrical numbers in the bar and dot system—using a bar for five and a dot for single units—the central Mexicans in the late Postclassic always depicted the numerical coefficients as individual disks that are usually organized in one or more short runs, often strung together.

The origin of the thirteen-day cycle is unknown. One theory is that it actually predates the twenty-day count: that it represents the original cycle associated with thirteen deities, which was amplified to twenty to conform with the vigesimal counting system (Thompson 1971:99; Aveni 1989:199, 351). Evidence for this is found in Classic Maya hieroglyphs, where the head variants for numbers 1 through 13 are repeated as the gods and head variants for thirteen of the day signs, which led Thompson (1971:99) to suggest that the longer cycle grew from the shorter one. Others have suggested that the thirteen-day period derives from other astronomical cycles or that it is simply a result of dividing the 260-day count by twenty.¹⁰ The thirteen-day cycle is probably related to the pan-Mesoamerican conception of a thirteen-layered heaven, although it is hard to say which came first.

The 260-Day Count

The count of thirteen numbers and the count of twenty day signs ran concurrently, assigning both a number and a sign to each day (Table 1). As one day ended and

Table 1. THE CENTRAL MEXICAN *TONALPOHUALLI*

Crocodile	1 (1)	8	2	9	3	10	4	11	5	12	6	13	7
Wind	2	9	3	10	4	11	5	12	6	13	7	1 (18)	8
House	3	10	4	11	5	12	6	13	7	1 (15)	8	2	9
Lizard	4	11	5	12	6	13	7	1 (12)	8	2	9	3	10
Serpent	5	12	6	13	7	1 (9)	8	2	9	3	10	4	11
Death	6	13	7	1 (6)	8	2	9	3	10	4	11	5	12
Deer	7	1 (3)	8	2	9	3	10	4	11	5	12	6	13
Rabbit	8	2	9	3	10	4	11	5	12	6	13	7	1 (20)
Water	9	3	10	4	11	5	12	6	13	7	1 (17)	8	2
Dog	10	4	11	5	12	6	13	7	1 (14)	8	2	9	3
Monkey	11	5	12	6	13	7	1 (11)	8	2	9	3	10	4
Grass	12	6	13	7	1 (8)	8	2	9	3	10	4	11	5
Reed	13	7	1 (5)	8	2	9	3	10	4	11	5	12	6
Jaguar	1 (2)	8	2	9	3	10	4	11	5	12	6	13	7
Eagle	2	9	3	10	4	11	5	12	6	13	7	1 (19)	8
Vulture	3	10	4	11	5	12	6	13	7	1 (16)	8	2	9
Movement	4	11	5	12	6	13	7	1 (13)	8	2	9	3	10
Flint	5	12	6	13	7	1 (10)	8	2	9	3	10	4	11
Rain	6	13	7	1 (7)	8	2	9	3	10	4	11	5	12
Flower	7	1 (4)	8	2	9	3	10	4	11	5	12	6	13

Note: The table correlates the sequent day signs and day numbers. Numbers in boldface indicate the sequent *trecenas*.

another began, both cycles advanced by one. The day 1 Crocodile was always followed by 2 Wind, 3 House, 4 Lizard, and so forth, until the shorter thirteen-day cycle ended with 13 Reed, after which it began again with 1 Jaguar, 2 Eagle, and so forth, until the twenty-day cycle was completed with 7 Flower. Then the twenty-day cycle began again with Crocodile, while the thirteen-day cycle continued with 8, to yield 8 Crocodile, 9 Wind, and so forth. In this way, after 260 discretely named days had passed, the *tonalpohualli* came again to its first day, 1 Crocodile, to follow the cycle again. These were the day names that the Aztecs

and their neighbors used to date events and to name individuals.

The 260-day cycle is an exquisite creation. While the 365-day *xihuitl* approximates the solar year of 365.25 days, the *tonalpohualli* approximates or correlates with a number of other important astronomical as well as human cycles. Astronomically it approximates the average time between the first appearance of Venus as morning star and as evening star (263 days); and, less closely, it approximates nine lunar months (265.5 days). Doubled (520 days), it equals three eclipse years (519.93); tripled (780), it approximates one synodic revolution of Mars; quintupled (1,300), it equals forty-

four revolutions of the Moon. These astronomical correlations have been proposed as reasons for the creation of the 260-day cycle, but its origin more probably lies with the human body, as is true for the twenty-day count.¹¹

The 260-day cycle very likely originated with women, who recognized that it approximates the average duration of a pregnancy (266 days). As Dennis Tedlock (1985:232) points out, the count even more closely equals the time from a first missed menstrual cycle, when a woman first notices she is pregnant, until childbirth. This means that it is a natural human cycle based less on exact human biology than on the personal experience and perception of biological functions. This also means, as Mary Miller (1986:39) notes, that a child would have already completed a cycle by the time he or she was born. Many contemporary Maya and Mexican people (e.g., the Quiche Maya and Mixtecs) associate the period of pregnancy with the 260-day cycle.¹² And since the twenty-day count is so clearly based on the human body, it stands to reason that the larger cycle also would be. The happy correspondence with multiple celestial cycles then made the 260-day count that much more valuable for astronomical computations.

The 365-Day *Xihuitl*, the 52-Year Cycle, and the Correlation of Calendars

Although the 260-day cycle was the fundamental tool for naming events and persons and was the device for divination, the 365-day *xihuitl* or civil year ran concurrently with it. This year was composed of eighteen festival periods, which the chroniclers called “months,” each of twenty days, with the feast coming on the final day.¹³ At the end of this festival year came the five leftover or extra days, collectively known as the *nemontemi*, which belonged to no “month.” Although they bore day names in the *tonalpohualli* sequence, they were considered unlucky or baleful.¹⁴ No rituals or serious activities were conducted then; the *nemontemi* were times of quiet and fasting before the new *xihuitl* began.

Although the monthly cycle does not itself figure in the divinatory almanacs, it is relevant here because year dates, which are tied to the monthly cycle, do appear in some almanacs. The civil year is also a factor in correlating the Aztec, Mixtec, and Christian calendars.

Each 365-day civil year took one of the *tonalpohualli*

days as its year name.¹⁵ Because of the way the two cycles intermeshed, the year-bearer days fell on only four day signs—Rabbit, Reed, Flint, and House—and the numbers 1 through 13 in sequence. The civil year 1 Rabbit, for example, was followed by years 2 Reed, 3 Flint, 4 House, 5 Rabbit, and so forth. The 260-day count coincided exactly with the 365-day count every fifty-two years, at which time the Aztecs metaphorically bound the years and understood the great cycle to be complete. The 52-year cycle, like the 20-day count and 260-day count, also has a human relevance, for it approaches the average human lifespan. Persons who had reached their fifty-second year had passed a significant milestone: having completed a cycle, they were considered aged and venerable.

The most widely accepted correlation between the Aztec and Christian calendars is that proposed by Alfonso Caso (1967:41–70, 1971). His correlation is based on the dating of several major events during the conquest as these are given in a number of sixteenth-century sources from the Spanish and Nahuatl worlds, and it holds that the Aztecs did not factor in a “leap day” every four years. It equates August 13, 1521, in the Julian calendar with day 1 Serpent year 3 House in the Aztec count, this being the day when Tenochtitlan fell to the Spaniards and Tlaxcalans.¹⁶

Throughout Nahuatl-speaking central Mexico and within and around the Mixteca, a single *tonalpohualli* count seems to have been in operation. This means that a 1 Serpent day in Tenochtitlan was a 1 Serpent day in Tilantongo and Tututepec in the Mixteca. The Mixtecs, however, chose a different day for the year bearer (one forty days earlier), which means that the year 2 Reed in Tenochtitlan was the year 1 Reed in Tilantongo.¹⁷ The Mixtecs considered the day 1 Crocodile year 1 Reed the beginning of their cycle and a metaphor for beginnings (Furst 1978b), which may help explain why the Aztecs held the New Fire Ceremony and ushered in a new 52-year cycle in the year they called 2 Reed.¹⁸

Although each day had a place in both the *tonalpohualli* and the *xihuitl*, it was the 260-day *tonalpohualli* that spoke most directly to the Aztec people. The gods, events, and other elements it carried as augural messages governed the way people conducted their affairs and even determined what kind of people they were likely to become. The eighteen festivals of the 365-day *xihuitl* were large public affairs, conducted on a com-

munity or polity level, but no person asked the *xihuitl* for guidance. The people instead turned to the *tonalpohualli* to know the forces that affected them personally. Eloise Quiñones Keber (1995:154) points out that the rituals conducted according to the *tonalpohualli* tend to be personal and local, which is true especially for the offerings and sacrifices made by individuals desiring good outcomes for their fortunes. Exceptions are the larger rituals that open each 13-day period and the dozen-plus major feasts tied to specific *tonalpohualli* days, such as the feast of Huitzilopochtli on 1 Flint or the feast of the sun on 4 Movement (Sahagún 1953–1982, bk. 2:35–41; Quiñones Keber 1995:155–156). These the Spaniards called “movable feasts,” because they occurred at different times of the civil year, in contrast to the “fixed feasts” of the *xihuitl*.

Divinatory Books

Accumulated knowledge of the calendar and of the mantic influences and festivals attached to different units of time was preserved in the painted book called *tonalamatl* in Nahuatl. The name means literally “day book,” from *tonal* (“day”) and *amatl* (“paper, book”). In these codices the days were visually displayed in different permutations according to the multiple cycles of the calendar, along with the mantic influences pertaining to them. The books also contained astronomical and medical knowledge, cosmological truths, and insights into omens and prophecies, as well as protocols for rituals both simple and complex.

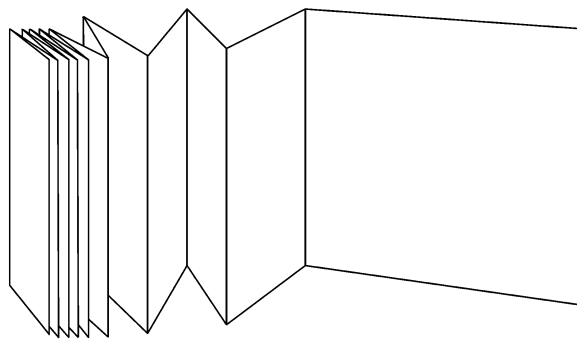
The books themselves were objects crafted of either deer hide or bark paper (*amatl* in Nahuatl), generally organized as a screenfold (Fig. 2).¹⁹ To achieve this screenfold, individual sheets of hide or paper were attached together as a long strip, then folded back and forth like a screen and coated with a white gesso; the images were painted, usually on both sides. Wood or stiffened leather end pieces glued to the first and last leaves made effective covers. The largest manuscript, in both page size and overall length, is the Codex Borbonicus from the valley of Mexico. Its *amatl* pages each measure 39 by 39.5 cm, and its thirty-six pages extend for an impressive 14.22 m when fully stretched out. The smallest in page size is the Codex Vaticanus B; its hide pages measure only 13 by 15 cm, although the full forty-

nine pages can extend unfolded for 7.35 m. One manuscript (Aubin No. 20) is not a screenfold at all but a large sheet of hide (51 by 91 cm), now folded vertically into halves but once folded twice more into eighths; if the folds are not original—and they may not be, because they have destroyed significant parts of the content—the sheet may have once been rolled, hung, or simply stored flat.²⁰

Even within this small extant corpus we see great variation in the bookmakers’ skill, such as we would expect in manuscripts painted at different times, in different places, and under different circumstances. The makers of the finest manuscripts (such as the Borbonicus, Borgia, Laud, and Fejérváry-Mayer) were careful to thin their hide and paper sheets where their edges overlapped and to glue them carefully, so the edges of the sheets are barely noticeable under the gesso finishing coat. The Borgia, Laud, and Fejérváry-Mayer have particularly fine gesso coatings that offer a stiff, smooth, and dazzling white painting surface. They represent the height of the bookmaker’s art. Their painted images are also the most carefully and exquisitely painted of all the codices.

At the other end of the spectrum is the poorly crafted Codex Porfirio Díaz, made in the early colonial period in the Cuicatec region of Oaxaca. Originally designed as a local history painted across a long *tira* or roll, it became folded as a screenfold; and a series of almanacs was then added on the reverse of ten of its pages. Its bookmaker was as sloppy as its painters. First, the bookmaker scraped the hides only coarsely, leaving lumps on the surface and hairs under the overlaps; then he or she failed to thin them where they overlapped and

Fig. 2. Physical structure of a screenfold codex. Drawing by Heather Hurst.



sewed the overlaps together with coarse leather straps using long running stitches; finally, he or she skimped on the gesso coating. All this made the hide overlaps obvious (and, indeed, disruptive to the images) and the painting surface weak. Following this sorry performance, the painter of the divinatory section drew awkward images with an unsure line, working only in black ink; none of the figures have the rich colors of those in the other codices.²¹

Even imperfectly crafted codices were highly prized, however. The Vaticanus B is clumsily painted, but its existing wooden cover still bears traces of turquoise mosaic decoration (Anders 1972:29). As sacred books containing the wisdom of the cosmos, these books may have once been embellished with costly ornamentation.

Although most extant divinatory codices, and all the Mixtec divinatory and genealogical-historical screenfolds, are made of hide, the Mixtec word for book, *tutu*, is also their word for paper. The Aztecs called books *amoxtili*, which unites the roots *amatl* (bark paper, from the inner bark of the fig tree) and *oxtli* (glue) to yield a literal “glued sheets of paper” (León-Portilla 1992b:317), and all extant Aztec books *are* of paper. This conception of books as paper books must have deep Mesoamerican roots, for the Maya codices are paper rather than hide. It is clear that when Mesoamericans thought of books they thought of paper books, although they made them in other materials as well.²²

Containers of Universal Knowledge

The surviving *tonalamatls* are multipurpose books. Their numerous almanacs relate units of time to a wide range of mantic influences that touch many parts of Aztec life. Most of the almanacs can pertain to a variety of situations, but there are also distinct almanacs dedicated to marriage partners, to birth and infancy, to journeys, to agriculture, and to the influences of the planet Venus, mentioning just the most obvious. Embedded in these almanacs, often as metaphorical expressions, is knowledge about the natural and supernatural world, signs and portents, the gods and their actions, and mythic stories of great antiquity. Prescriptions for rituals and specific rites are also inserted into some almanacs, or they appear as independent units in the books.

Despite the broad scope of existing *tonalamatls*, the chroniclers speak of books that are more specialized. Motolinia (1951:74) listed five kinds of books: the year-count or annals history and four others that were variations on the divinatory codex. These four are books concerning “the days and . . . feasts which the Indians observed during the year,” “dreams, illusions, superstitions and omens in which the Indians believed,” “baptism and with names that were bestowed upon children,” and “the rites, ceremonies and omens of the Indians relative to marriage.” Later he tells how the Aztecs had “books describing dreams and explaining their meaning, all set down in figures and characters. There were also masters who interpreted these books as well as similar ones for marriage.” Sahagún (1953–1982, bk. 3:67) likewise mentions the *temicamatl* or “book of dreams” as well as books of songs, specifically the gods’ songs. Durán (1971:293) adds still other kinds of books to the corpus when he explains how the masters in the *calmecac* taught “all kinds of arts: military, religious, mechanical, and astrological. Which gave them knowledge of the stars. For this they possessed large, beautiful books, painted in hieroglyphs, dealing with all these arts, [and these books] were used for teaching.” Peter Martyr (Pedro Mártir de Anglería 1964, 1:426) mentions books encoding “the order of their sacrifices and ceremonies, their [calendrical] counts, astronomical observations, and information on the methods and times to plant.” Fernando de Alva Ixtlilxochitl speaks of books that record “all the sciences,” used by philosophers and sages, and he mentions painted cosmogonies, such as those that survive in pictorial and/or textual translation in the Codex Vaticanus A/Ríos and the *Historia de los Mexicanos por sus pinturas* (Alva Ixtlilxochitl 1985, 1:49; Garibay 1979:23–66; León-Portilla 1992b:323).

Special-function books devoted specifically to dreams, astronomy and other sciences, theology, sacred songs, marriage, the washing and naming of children, and planting have not survived. Instead, most of these separate topics are treated in different almanacs contained in a single book. All the surviving divinatory codices can be used to choose the name and read the fate of a newborn, for example. Three have almanacs that give the fate of marriage partners, although they do not describe the actual marriage ritual, and several almanacs pertain to the planet Venus. While there are

no known sections dedicated specifically to dreams, visions, and omens, Sahagún (1997:174–177) recorded omens and dream interpretations in his *Primeros memoriales*, and Book 5 of his Florentine Codex is entirely devoted to the meaning of omens. Dream interpretation was a significant area of the diviner's art in Mexico. The popularity of books of dream interpretation in sixteenth-century Europe meant that the friars would have had an interest in this genre (Klopfer 1989). We are thus left in the dark only about the song books, which do not survive even in part. They must have been similar to the books that recorded the *buehuetlatolli* or “speeches of the elders,” those long orations that accompanied major life changes like washing and naming of infants, entering school, marriage, childbirth, and death. These painted books are also lost, although the chroniclers attest to their existence.²³

Conceptually, the divinatory codices were instruments both for counting and for seeing (Monaghan and Hamann 1998). Their almanacs literally counted out the days and units of time and also provided the knowledge required to see what is ordinarily unseen. The Nahuatl words for reading, *amapohua* and *amoxpohua*, contain the root *pohua*, which means “to count” (Molina 1970, 1st pagination:77), so that reading is literally counting. The same is true in Mixtec and Zapotec (Monaghan and Hamann 1998:133). The *tonalpouhque* (diviners) who read the *tonalamatls* were literally the “day counters,” who read the days and their destinies by counting them. This notion of reading as counting still endures among Quiche diviners in Momostenango, who divine by counting the days in the 260-day cycle and by counting and sorting kernels of maize (Tedlock 1982:153).²⁴

In many Mesoamerican languages, the word for reading is also the word for seeing (Monaghan and Hamann 1998:133). As seeing instruments, or mirrors, divinatory codices allowed the diviners to see things that are ordinarily obscure: the future, for example, or situations causing illness. As Enrique Florescano (1994:32) puts it, the sage, scholar, or reader of divinatory codices “has the power to see and make seen that which remains hidden to the common human being” or, as Sahagún's informants characterized it, to “hold a mirror before one's face” (León-Portilla 1991:11). Elsewhere Sahagún (1953–1982, bk. 4:152) described the

tonalamatl as a mirror and explained that people who come to have their fates read “come to see their reflections.” Ruiz de Alarcón (1984:148, 153–154, 357) also equated divinatory books with mirrors, linking them as a couplet: “I will look inside my book, my mirror.”

The concept of the book as an instrument of revelation remains strong today, even among diviners who do not themselves read. Frank Lipp (1991:151) reports that Mixe diviner/curers, when they were initiates, dreamt of Dios, who imparted the power to heal by revealing “a mystical book containing rows of strange letters and drawings, which disclose to the initiate the wisdom of the universe.” The famous Mazatec diviner María Sabina also told how she received knowledge from a Book of Wisdom that manifested itself in a vision. Although she was illiterate, in her vision she came to read it and understand what was written. In her chants, she would refer to it as “my clean book, my good book” and call herself a Woman of the Book (Monaghan and Hamann 1998:136–137). The point these modern examples bring home is that the book is central to the divinatory act, serving as an instrument for seeing and a container of all the requisite knowledge.

Soothsayers, Sorcerers, and Sages

Those who looked into the divinatory codices in order to see and understand were the diviners and seers. In Nahuatl they were called *tonalpouhque* or “readers (literally ‘counters’) of the day signs,” and *tlapouhque* or “soothsayers” (literally “counters of something”).²⁵ The Quiche Maya use the term “daykeeper” for those who divine with the 260-day cycle (Colby and Colby 1981; Tedlock 1982). These readers of the days and destinies belonged to the group of individuals who were absolutely essential to the functioning of Aztec life and, indeed, to the world as they understood it. They were people who knew more than the ordinary person, who had access to extra knowledge, and who even created this knowledge. Using their superior understanding, these individuals mediated between ordinary humans and the supernatural world in matters both small and important. This group embraces manuscript painters, insofar as the painters are creators of books and record-

ers of knowledge. But at the core are the sages, diviners, sorcerers, curers, midwives, and physicians, all those who see and understand what others do not.

Although Sahagún (1953–1982, bk. 10:29–31, 53) assigned them different occupational titles, they all shared many of the same talents and were agents who communicated between humanity and the supernatural and otherwise unknown natural worlds. They were all people who practiced *toltecayotl*, the arts and sciences of the Toltecs (León-Portilla 1980). Of the diviner, Sahagún (1953–1982, bk. 10:31) says:

The soothsayer [*tlapouhqui*], the reader of the day signs [*tonalpouhqui*]. The soothsayer is a wise man, an owner of books [and] of writings. The good soothsayer [is] one who reads the day signs for one; who examines, who remembers [their meaning]. He reads the day signs; he brings them to one's attention.

The bad [soothsayer is] a deceiver, a mocker, a false speaker, a hypocrite—a diabolical, a scandalous speaker. He disturbs, confounds, beguiles, deceives others.

When Sahagún (1953–1982, bk. 4:142) elaborates their association with the 260-day calendar, he remarks that “the people esteemed and honored [the soothsayers] greatly. They considered them to be prophets and knowers of future things. Hence they depended on them for many things.” Durán (1994:445, 1971:386) adds that the soothsayers were “old men who were specialists in the division of time,” “wise in the old law, who taught and still teach the young folk who are now being educated . . . in the count of the days and of the years and of the ceremonies and ancient rites. . . .”

These *tonalpouhque* or “counters of the destiny,” to use Ángel María Garibay's (1944–1947:313) phrase, read and interpreted the fates of individuals at major points in their life, when they were ill, and when they were engaged in significant activities and needed advice. The chroniclers tell, for example, how Moctezuma consulted such diviners to learn the meanings of omens and prophecies that were said to foretell the conquest; years earlier he took their advice about the completion of the 52-year cycle.²⁶ The chroniclers also emphasize that the soothsayers determined what appropriate sacrifices and offerings should be made to which deities (Sahagún 1997:176–177).

The distinction between the soothsayer (*tonalpouhqui* and *tlapouhqui*) and the sorcerer (*naoalli*) was perhaps a small one. Many of the chroniclers conflate the two or use the terms “soothsayer,” “astrologer,” “diviner,” and “sorcerer” together or interchangeably. But of the two, the sorcerer seems to have been the more active agent. Whereas the soothsayer read the day signs and interpreted the fates for people, ordering penances and offerings, the sorcerer could likewise do these things but could also actively cast spells and make things happen. The sorcerer could transform himself or herself into an animal or other form.²⁷ Sahagún (1953–1982, bk. 4:31) characterizes the sorcerer (*naoalli*) as:

. . . a wise man, a counselor, a person of trust—serious, respected, revered, dignified, unreviled, not subject to insults. The good sorcerer [is] a caretaker, a man of discretion, a guardian. Astute, he is keen, careful, helpful; he never harms anyone. The bad sorcerer [is] a doer [of evil], an enchanter. He bewitches women; he deranges, deludes people; he casts spells over them; he charms them; he enchants them; he causes them to be possessed. He deceives people; he confounds them.

The sorcerer is also “a knower of the land of the dead, a knower of the heavens,” one who knows when it will rain, who orders sacrifices, and who foretells plagues and famine (Sahagún 1997:212).

When the Aztec rulers required supernatural or extranatural action, they turned to the sorcerers. When Moctezuma desired to contact the old goddess Coatlicue (the mother of their tribal patron Huitzilopochtli), who still lived in the ancient homeland of Aztlan, he asked his counselor Tlacaelel for advice. Tlacaelel said that for this perilous journey to a distant land and back in time they should send not warriors but “wizards, sorcerers, magicians, who with their enchantments and spells can discover that place.” Sixty sorcerers, the wisest in the land, departed and went to Aztlan, transforming themselves into their animal forms for the journey; only forty returned at the end (Durán 1994:212–215, 221). When the omens about the Spaniards later came true and Hernán Cortés was marching to Mexico-Tenochtitlan, Moctezuma repeatedly sent sorcerers, magicians, and wizards to enchant, cast spells on, and bring harm to the Spaniards. Cuauhtemoc did the same when he became emperor.²⁸

Some places were famous for their powerful sorcerers. In the time of Acamapichtli, the first Aztec emperor, Cuitlahuac was an enchanted city full of “great sorcerers and necromancers,” according to Alva Ixtlilxochitl (1985, 1:319). Durán (1971:459–460) names Malinalco as a major center where “sorcerers were taught their craft,” and the Marquesado (around modern Cuernavaca) as home to “the greatest fortune-tellers, sorcerers, that ever existed in the entire land.” When Moctezuma sent sorcerers to harm the Spaniards, he called them from Malinalco and from the Marquesado cities of Yauhtepec, Huaxtepec, and Tepoztlan (Durán 1994:512–513).

The term “sorcerer” carried malevolent as well as positive associations. The goddess Malinalxochitl, the evil sister of Huitzilopochtli, is called a sorceress (Crónica Mexicayotl in Codex Chimalpahin 1997, 1:79). Religious chroniclers like Sahagún and Durán often use the term “sorcerer” as a negative characterization. Thus, Durán (1994:464) says that “although there were great astrologers and people who had knowledge of the stars and of the time periods, the majority were sorcerers, tricksters, enchanters, magicians, and people possessed by the devil.” When Sahagún (1953–1982, bk. 4:30) describes the bad sage and the bad physician, he uses the terms “sorcerer” and “soothsayer” in a couplet (*naoalli tlapouhqui*) to characterize them as deluders and deceivers. In his long list of the “bad names of the bad men,” he puts the sorcerer (*naoalli*) first, followed by the diviner (in this case, *tlaçihuiqui* or astrologer), the caster of hail, the caster of spells, the bewitcher of people, and so forth.²⁹ In his listing of the “bad women,” he includes the female diviner and curer after the prostitutes and procuresses (Sahagún 1997:217–218). According to the fates carried by the day signs, those children destined to become sorcerers and astrologers (*naoalli* and *tlaçihuiqui*) are also described as being inhuman, wicked, evil, and corrupt.³⁰

This malevolent characterization of the sorcerer and diviner largely reflects the friars’ unease with these kinds of individuals, who were culturally important to Aztec society but fundamentally antithetical to the friars’ Christian mission. Sahagún (1953–1982, bk. 4:139, 145) went so far as to proclaim the 260-day count not a calendar at all but “a pernicious count, superstitious and full of idolatry” and “an artifice made by the devil himself.”

Still, Sahagún recognized both the diviner and the sorcerer to be wise and respected individuals who performed central roles in Aztec life. In his description of these men’s occupations, he equates the soothsayer and sorcerer with the sage or wiseman. In book 1 (Sahagún 1953–1982, p. 24), where he tells of the goddess Tlazolteotl and the confessions made to her, he describes those who hear the confessions—the mediators between the goddess and the confessor—as “the soothsayer, the wise one, in whose hands lay the books, the paintings; who preserved the writings, who possessed the knowledge, the tradition, the wisdom that hath been uttered.” In telling of omens, he mentions “the readers of the day signs . . . they who were called wise ones” (Sahagún 1953–1982, bk. 5:151).

The wise ones, *tlamatinime* in Nahuatl, were the most trusted and esteemed people in Aztec Mexico. Sahagún (1953–1982, bk. 10:29–30) describes the wise man as:

. . . exemplary. He possesses writings; he owns books. [He is] the tradition, the road; a leader of men, a rower, a companion, a bearer of responsibility, a guide.

The good wise man [is] a physician, a person of trust, a counselor; an instructor worthy of confidence, deserving of credibility, deserving of faith; a teacher. [He is] an adviser, a counselor, a good example; a teacher of prudence, of discretion; a light, a guide who lays out one’s path, who goes accompanying one. [He is] reflective, a confessor, deserving to be considered as a physician, to be taken as an example. He bears responsibility, shows the way, makes arrangements, establishes order. He lights the world for one; he knows the land of the dead; he is dignified, unreveiled. He is relied upon, acclaimed by his descendents, confided in, trusted—very congenial. He reassures, calms, helps. He serves as a physician; he makes one whole.

We see in Sahagún’s description reflections of both the soothsayer and sorcerer. The wiseman, like the soothsayer, is an owner of books, a bearer of tradition, a confessor, and a mediator who guides people and shows the way. The wiseman, like the sorcerer, is a trusted counselor, respected and unreveiled, one who knows the land of the dead and who actively establishes order. Wisemen were also historians and poets (Boone 2000b:25–27, 2005), but most fundamentally

they were knowledgeable about the heavens and destinies, they knew what offerings to make when, and they were guides and leaders for their people.

In 1524, when the Aztec lords met formally with the twelve newly arrived Franciscans, they spoke of the sages as follows:

... there are those who guide us; they govern us, they carry us on their backs and instruct us how our gods must be worshipped; ... who make offerings, who burn incense, those who receive the title of Quetzalcoatl. The experts, the knowers of speeches and orations, it is their obligation; they busy themselves day and night with the placing of incense, with their offering, with the thorns to draw their blood. Those who see, those who dedicate themselves to observing the movements and the orderly operations of the heavens, how the night is divided. Those who observe [read] the codices, those who recite [tell what they read]. Those who noisily turn the pages of the illustrated manuscripts. Those who have possession of the black and red ink [wisdom] and of that which is pictured; they lead us, they guide us, they tell us the way. Those who arrange how a year falls, how the counting of destinies, and days, and each of the twenty-day months all follow their courses.³¹

This characterization of the *tlamatinime*, addressed as it is to the Franciscan friars, naturally emphasizes their roles as priests, who knew the gods and what offerings and speeches should be made. Some bore the religious title “Quetzalcoatl,” which identified them as belonging to the very highest priestly ranks (Sahagún 1953–1982, bk. 3:69, bk. 6:54). They were also astronomers (Fig. 3), and they were owners of books. But fundamental to it all was their responsibility as calendar priests and soothsayers who tracked the cycles of time and interpreted their meaning. In these combined roles, the wise ones were the moral and spiritual guides and leaders who figuratively carried the Aztec people on their backs.

Another telling description of the wise ones, stemming from a pivotal incident deep in the Aztec past, elaborates on the importance of the books that the *tlamatinime* carried. In recounting the origin of the Mexica, Sahagún (1953–1982, bk. 10:190–191) tells how the people were resting at the mythical homeland of Tamoanchan when the wise ones, called “Amoxoaque” (which Sahagún’s [1956, 3:208] accompanying Spanish

text translates as “men knowledgeable of the ancient pictures”), decided to leave and abandon the people there:

Thereupon departed those who carried the god on their back; ... They carried the writings, the books, the paintings [*in tllili, in tlapalli, in amoxtli, in tlacujloli*]. They carried the knowledge [*in tlamatiliztli*]; they carried all—the song books, the flutes.

But four remained of the old men, the wise men [*in veuetque, in tlamatinjme*]: one named Oxomoco, one named Cipactonal, one named Tlaltetecui, one named Xochicauaca. And when the wise men had gone, then these four old men assembled. They took counsel; they said: “The sun will shine, it will dawn. How will the common people live, how will they dwell? ... What will govern? What will rule? What will lead? What will show the way? What will be the model, the standard? What will be the example? From what will the start be made? What will become the torch, the light?”

Then they devised the book of days, the book of years, the count of the years, the book of dreams. They arranged the reckoning just as it has been kept. And thus was time recorded during all the time of the Tolteca, the Tepaneca, the Mexica, and all the Chichimeca reign endured. (Sahagún 1953–1982, bk. 10:191)

The books featured so prominently in this incident were not legal texts or political charters but calendars, histories, and divinatory codices, books of song

Fig. 3. The head priest observes the stars in the heavens. Codex Mendoza 63r. Drawing by Heather Hurst.



and books of dreams. Called *in tlilli in tlapalli*, literally “the black, the red,” referring to the black and red ink used for writing, they held the essential knowledge. It was this ownership of books and the control of the knowledge contained therein that made the *tlamatinime* bearers of cultural and intellectual tradition, leaders, and counselors. When the books were taken away, the four remaining wise ones asked not *who* would lead but *what* would lead: the model, the standard, was the painted divinatory codex. It was the torch, the light that leads the way; it was the guide to correct living.

The four who stayed behind at Tamoanchan were described as *in ventque*, *in tlamatinjme*, which is usually translated in the masculine as “the old men, the wise men.” But the Nahuatl terms are not gendered, and one of the four—Oxomoco—was female.³²

The chroniclers speak of Cipactonal and Oxomoco as either the first human couple or a protohuman couple, who created the calendar and the different divinatory systems the Aztecs used. As Sahagún (1953–1982, bk. 4:4) says: “And this count of days—so it was claimed—was an invention of the two called and named Oxomoco and Cipactonal, who gave it to the people.” The *Anales de Cuauhtitlan* (Codex Chimalpopoca 1992:25) indicates that “[t]he year count, the day sign count, and the count of each twenty-day period were made the responsibility of those humans known as Oxomoco and Cipactonal. . . . Both were very old.” The *Historia de los Mexicanos por sus pinturas* (1979:25) adds that the female was given the gift of divining by casting maize kernels; it tells how, in the half light of creation, the four gods born of Tonacatecuhli and Tonacacihuatl created fire, a half sun, and a man and a woman (Oxomoco and Cipactonal), from whom were born the common people. “And to her the gods gave some grains of maize, to be used in curing, divining, and sorcery, and so the women use them today. Then they made the days and divided them into months. . . .” Oxomoco and Cipactonal are thus the prototypal diviners. They clearly are also the models for the aged couple Xumcane and Xpiyacoc who appear in the Quiche Maya Popol Vuh as the first daykeepers, midwife, and matchmaker (Tedlock 1985:34, 71–81, 83; Seler 1990–1998, 2:45).

The couple are always presented visually as being very old, and usually they appear together with their

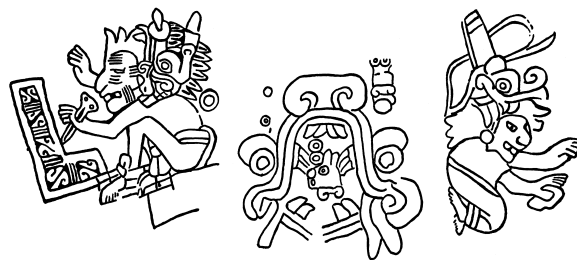


Fig. 4. The old couple Cipactonal (*left*) and Oxomoco (*right*) carved on a boulder near Yauhtepec, with a cave between them. From Nowotny 1961:fig. 9; reproduced with permission of Gebr. Mann Verlag.



Fig. 5. Cipactonal (*left*) and Oxomoco (*right*) divine by scattering maize and pulling a knotted cord. Florentine Codex, bk. 4, chapter 1 (vol. 1, p. 246v). Photograph courtesy of the Biblioteca Medicea Laurenziana.

divinatory accoutrements (Figs. 4–7). In these pictorial representations, the pair usually have the wrinkled faces and snaggle-toothed jaws of the old and venerated as well as the “wild” curly hair of some supernaturals (also on Borgia 38). They often wear on their back the tobacco gourd of priests. Cipactonal is usually identified by his Cipactli or Crocodile name sign (the name Cipactonal means “Cipactli Day/Destiny”), which, as the first day of the *tonalpohualli*, ties him to the 260-day count. Oxomoco is usually shown scattering maize, holding a shell “dish” to cast the grains (Figs. 4, 7). On a boulder near Yauhtepec, home of renowned sorcer-

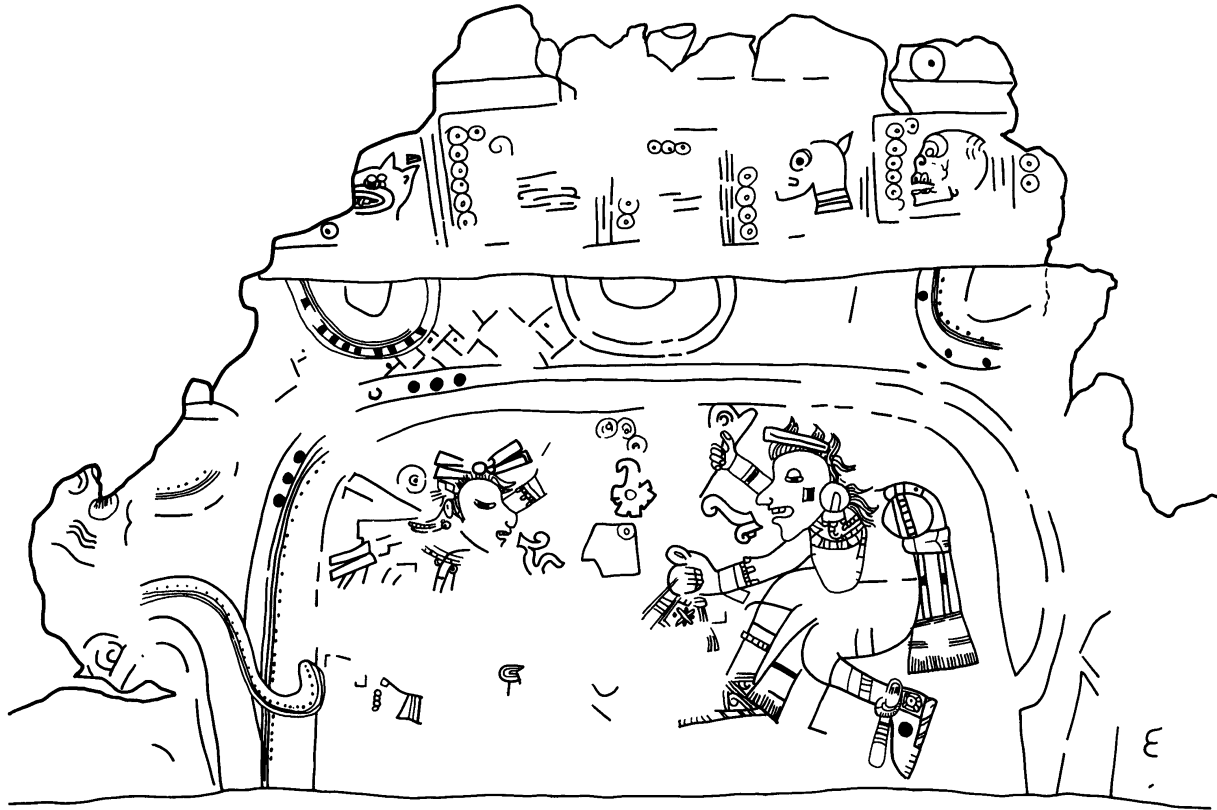


Fig. 6. Oxomoco (*left*) and Cipactonal (*right*) painted together on the face of the Calendar Temple at Tlatelolco. Drawing by Heather Hurst after Guilliem Arroyo (1998:51).

ers, the pair are carved on either side of a cave glyph (Fig. 4);³³ Cipactonal (named with his 1 Crocodile day sign) works over a divinatory codex, while Oxomoco casts her grains. In the Florentine Codex (Fig. 5), Cipactonal divines with scattered maize, while Oxomoco divines with knotted cords. The two are painted in their most conventional and iconic aspects on the Calendar Temple at Tlatelolco (Fig. 6) and in the Codex Borbonicus (Fig. 7), where they are surrounded by calendrical units of the *tonalpohualli*. These images actualize Sahagún's (1953–1982, bk. 4:4) statement that “those who were readers of the day signs embellished their book of days with their [Cipactonal's and Oxomoco's] representations, which they placed in the middle when they painted them. For it was said that they became lords of all the day count.”

Xochicauaca, one of the other two ancients who stayed behind at Tamoanchan to re-create knowledge and the books, is not otherwise mentioned in the ethnohistorical record. Tlaltetecuini (the Earth Stom-

per), however, also called Ixtlilton (Little Black Face), is a poorly understood deity associated with dancing, drinking, healing, and divination but also seemingly linked to painters and the calendar. Sahagún (1953–1982, bk. 1:73) calls him a “god of the ancients.” Sick children came to his temple, called Tlacuilocan (Painted Place or Place of the Painter/Scribe), to drink from “his black water” (a deep bowl of black liquid) and become well; when children first learned to speak, they made offerings at his temple (Sahagún 1953–1982, bk. 1:35, bk. 2:212, 1997:89). A patron of dance, he came to homes, danced, and opened the new pulque (maguey beer); there “his black water” could reveal adulterers and thieves (Sahagún 1953–1982, bk. 1:35). Representations of his image bear symbols relevant to the pulque gods, the dance god Macuilxochitl (Five Flower), and the sun, which may be why Nicholson (Sahagún 1997:101n43, 45) aligns him with the Macuiltonaleque, the five poorly understood calendar gods, of whom Macuilxochitl is one.³⁴ Tlaltetecuini/Ixtlilton

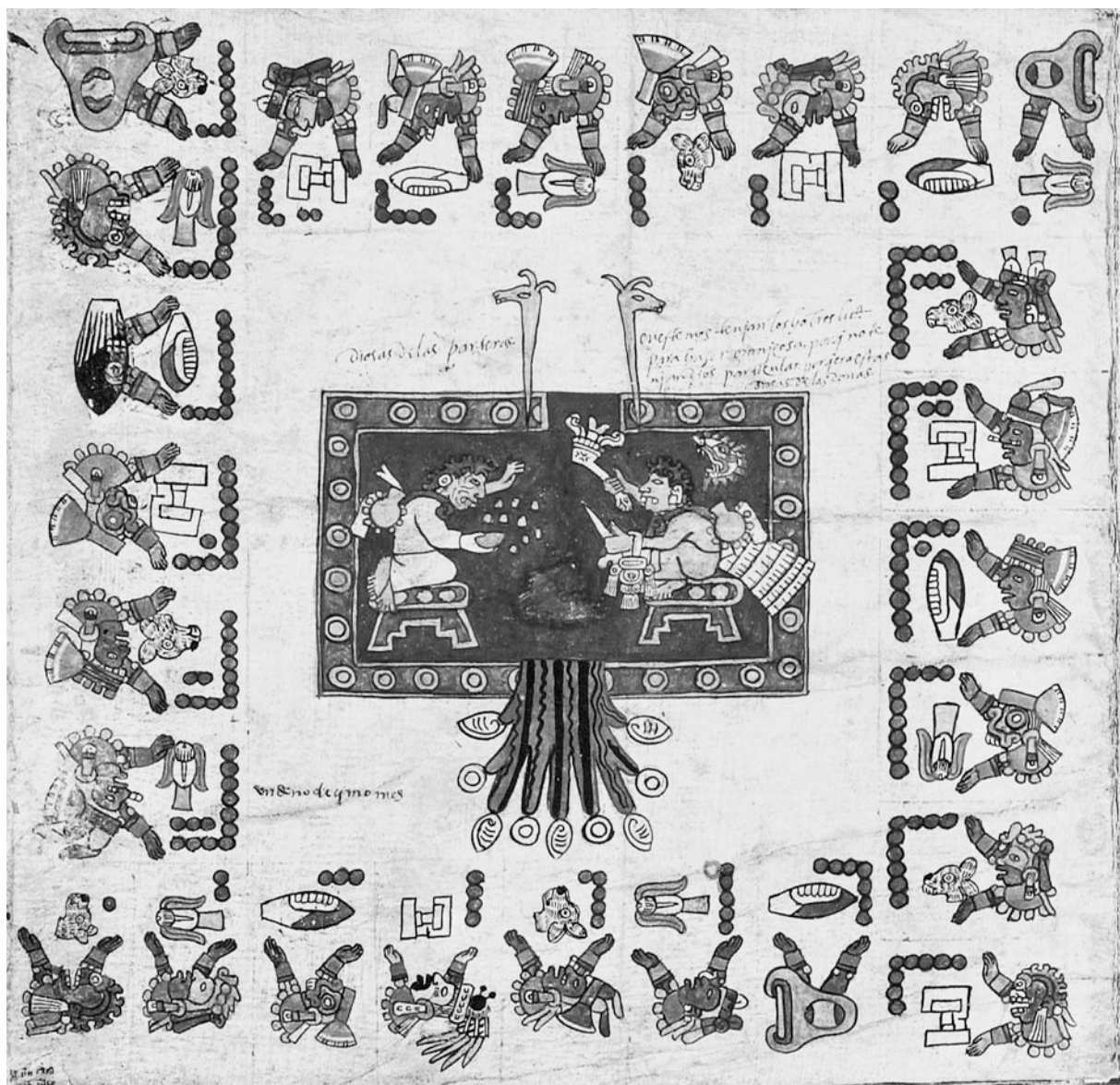


Fig. 7. Oxomoco (left) and Cipactonal (right) painted together, surrounded by twenty-six consecutive year signs and accompanying Lords of the Night. Codex Borbonicus 21. Photograph © Assemblée Nationale, Paris.

shares responsibility with Cipactonal and Oxomoco for that cluster of forces and actions that shape people's lives: the calendar, the scribal arts, speech, divination, and healing.

The arts of healing and curing (and by extension midwifery) run along side the arts of divination. Tlal-tetecui and Oxomoco are specifically characterized as healers, but all four who remained behind at Tammoanchan were also "the wise [ones] who discovered,

who knew of, medicine; who organized the medical art" (Sahagún 1953–1982, bk. 10:167). Sahagún (bk. 6:34) equates the soothsayer with the physician. Soothsayers, sorcerers, physicians, and midwives all had Teteo-innan/Toci as their special patron (Sahagún 1953–1982, bk. 1:15, 70). The *tonalpouhque* read the day counts not only to determine fates but to diagnose illness and develop cures. Thus, the written text that accompanies the painted *tonalamatl* in the Codex Tudela

(90r–94v, 124v–125r) includes prognostications for illness and names the offerings necessary to effect recovery (Tudela de la Orden 1980:296–304, 314–315; Batalla Rosado 2002:427–430, 435).

The term *ticitl* is usually translated as doctor or physician, but it also embraces midwives and other curers and is often extended to diviners and sorcerers.³⁵ Physicians, like soothsayers and sorcerers, belonged to that overarching category of sages or wise ones (Sahagún 1953–1982, bk. 10:29–30). Ruiz de Alarcón (1984:157) commented that although *ticitl* was commonly used to refer to a doctor, “it is accepted among the natives as meaning sage, doctor, seer, and sorcerer.” As an occupation, it was open to both men and women, and Sahagún (1953–1982, bk. 10:30, 53) includes the *ticitl* under both the men’s and women’s occupations. Pictured in the Codex Magliabechiano and cognate Codex Tudela, a female *ticitl* divines the illness of a male patient who has tears streaming from his eyes (Fig. 8). She discovers what may be an affliction of the eyes by casting maize and beans on a white blanket, throwing them from a *Spondylus* shell “bowl.” Opposite sits the cult image of Quetzalcoatl, whom Durán (1971:135) identifies as “the advocate for tumors, eye diseases, colds, and coughing.”³⁶ Maize casting was a preferred method for determining an illness and foreseeing its outcome (Ruiz de Alarcón 1984:153–154). It was the gift given to Oxomoco.

Although reading and interpreting the *tonalpohualli* was the most common form of divination, and maize casting the next preferred, the diviners and physicians employed a range of other practices. These included casting maize in water to see whether and how the kernels would float or sink, reading a person’s reflection in water, tying knots along a cord and then pulling them (Fig. 5), measuring parts of the body with one’s hand, interpreting dreams, and interpreting the appearance and actions of animals such as birds and serpents.³⁷ As Bernard Ortiz de Montellano (1990:148) points out, a careful physician could “control the process of divination when he could foresee the outcome of a presenting condition.” Ruiz de Alarcón (1984:155) noted that the physician would select the appropriate maize for casting in water, knowing that fresh, firm kernels sink whereas very old kernels tend to float. Knots could be tied along a cord in different ways so that they became tighter or looser when the cord was pulled.



Fig. 8. Female physicians diagnose illness in the presence of Quetzalcoatl. At the bottom, the healer on the left casts maize and beans onto a white blanket to diagnose what may be an eye disease of the man seated before her. Codex Magliabechiano 78r (1970 edition). Photograph courtesy of Biblioteca Nazionale Centrale, Florence.

The incantations recorded by Ruiz de Alarcón (1984:148, 153–154) refer to the divinatory techniques of maize casting and hand measuring as “my book, my mirror,” which suggests that these noncalendrical techniques were functionally equivalent to the calendrical ones that employed the *tonalamatl*, at least in the early seventeenth century when the *tonalamatl* had essentially disappeared. In the twentieth century, soothsaying by means of the 260-day count was still being practiced only in highland Guatemala, but many curers in Guatemala, Chiapas, Yucatan, Oaxaca, Guerrero, and the Huasteca still divine by maize, by the laying on of hands (called “measuring the bone” or “taking the pulse”), by looking into crystals (which are called mirrors), and by observing animals and natural phenomena.³⁸

Divination—by reading the *tonalamatl*, grains of maize, and other phenomena—was metaphorically a Toltec art. Under their god-priest Topiltzin Quetzalcoatl, the Toltecs excelled in the arts, sciences, and luxury crafts, which collectively came to be called *toltecayotl* (literally “Toltecness,” “the essence and whole of Toltec creation” and “the summing up of ancient wisdom and art”).³⁹ The Aztecs credited the Toltecs

with inventing the year count, day count, and divinatory system based on it. They considered the Toltecs to have been master scientists, who understood the stars and heavens as well as the world around them, and to have been “necromancers, sorcerers, witches, astrologers, poets, philosophers, and tellers of fates who used all the arts, good as well as bad” (Sahagún 1953–1982, bk. 10:166–169; Alva Ixtlilxochitl 1985, 1:273). As Tolteca and sons of Quetzalcoatl (Sahagún 1953–1982, bk. 10:187–188), the Mixtecs of Oaxaca were also considered especially skilled in the higher arts and sciences and the luxury crafts (also Alva Ixtlilxochitl 1985, 1:315, 402, 2:32).

The Toltec leader Quetzalcoatl was the ultimate soothsayer and sorcerer. The chroniclers refer to him as a great wizard and magician, who like Tezcatlipoca could transform himself into other forms (Sahagún 1953–1982, bk. 3:13; Durán 1971:68). Noble children born on the day 1 Wind, when the god Quetzalcoatl was worshipped, were destined to become “wizards and soothsayers” (Sahagún 1953–1982, bk. 4:101). The Mixtec culture hero Lord 9 Wind, the equivalent of Quetzalcoatl, appears in the opening pages of the Codex Vienna (48) as a jaguar singer, a sorcerer, and a manuscript painter, among other titles (Fig. 9). Eduard Seler (1963, 1:114) called Quetzalcoatl the “god of time and the calendar.”

Quetzalcoatl is also tied to the soothsayers because he was patron of the *calmecac*, the “place of instruction” for noble children and promising commoners.⁴⁰ At the *calmecac*, the sages taught a range of advanced artistic, humanistic, and scientific subjects, including astronomy and history, as well as orations, songs, and priestly responsibilities. It was here that the students learned the count of days and years and to read the *tonalamatl*. As Sahagún (1953–1982, bk. 3:67) notes: “Especially was there teaching of songs which they called the gods’ songs inscribed in books. And especially was there teaching of the count of the day, the book of dreams, the book of years.” An ancient oration tells that students also learned “knowledge concerning the heavens, how the sun, moon, and stars move, what are called the nine celestial crosspieces [planes], and . . . what are called the divine books” (León-Portilla 1992a:71).⁴¹

Reading the Fates

Once students had excelled at the *calmecac* and had learned to divine and interpret the *tonalamatls*, they were esteemed and valued as soothsayers and readers of the destinies. The most accomplished were attached to the major temples and the great royal houses, where they served the rulers and their courts. Some were surely attached to *capulli* and other neighborhood temples, and others worked more or less independently. In modern Momostenango, some simple consultations—such as a dream interpretation or advice about a small journey—could be had on the street; but more serious questions—a marriage prospect, for example—required a lengthy visit and a full scale divination (Tedlock 1982:138–139). Usually individuals went to see the reader of destinies at his or her location, but wealthy, esteemed, or high-ranking individuals sum-

Fig. 9. Metaphoric titles of Lord 9 Wind include the jaguar singer (*upper right*), he whose heart speaks (perhaps a sorcerer, *lower right*), and painter of manuscripts (*lower left*). Codex Vienna 48b. Drawing by Heather Hurst.



moned the soothsayer to them (Sahagún 1953–1982, bk. 1:27, bk. 4:152, bk. 6:197; Durán 1971:398). Soothsayers were paid in food, beverages, and other goods according to the means of their client. As Torquemada (1975–1983, 4:204) explains,

the astrologers and diviners [were] very esteemed in the republic and very revered by all; and they received much to eat with this office, because in only one occasion [of reading] in the house of a lord or king, they would be left rich for all their life. The people of lower standing paid [the astrologers] moderately, and the poor one gave them a turkey or something similar. And because there were many births and few diviners, they always had clients and their riches increased.

People sought the guidance of the soothsayer at major life events, such as birth, the naming and washing of a newborn, the selection of a mate and marriage, and confession to Tlazolteotl. A good marriage was built on the compatibility of the couple's day signs and numbers, but it was also important to arrange the ceremony on a day "of good disposition."⁴² The people also sought guidance for the multitude of questions and uncertainties that all humans carry with them.

Farmers turned to the soothsayer to know exactly when to work their fields, sow, harvest, shell, and store their produce. Although the farmers certainly relied on their knowledge of the seasons, they looked to the soothsayer to name the exact day. As Durán (1971:396–397) records: "If chili was not sown on a certain day, squash on another, maize on another, and so forth, . . . the people felt there would be great damage and loss of any crop sown outside the established order of the days. The reason for all this was that some signs were held to be good, others evil, and others indifferent . . . [They therefore] awaited a specific date to the exact day and moment, and then to a man they would sow first on the slopes and then on the flatlands." Durán (1971:397) was particularly frustrated by what he saw as superstitions, as when the indigenous farmers attending Mass sprang from their seats to rush to harvest their crop because "the old sorcerer found in his books or almanac that the day had come."⁴³ The days also governed activities in trade and commerce, buying and selling.

The days were read before journeys were taken, when a portent was seen, and when adversity struck. Ruiz de

Alarcón (1984:142) notes that soothsayers were consulted "by those sick with troublesome afflictions in order to know their cause and remedy, by those who have sustained a loss of possessions, by those whose wives, children, or slaves have left them, and by those who have been robbed in order to see where they will find what was taken from them and who was the aggressor." Merchants and others considered the day signs when they set out on a trip (Durán 1971:397; Sahagún 1953–1982, bk. 9:9; Alva Ixtlilxochitl 1985, 1:351). The soothsayers also chose the best times for bloodletting, declared when offerings should be made, and advised about warfare (Durán 1971:396; Sahagún 1953–1982, bk. 5:152). Moctezuma, for example, insisted that diviners be consulted and long orations and sacrifices be made to the gods every time his soldiers went to war. During the last days of the siege of Tenochtitlan, Cuauhtemoc heeded the advice of his diviner and ceased fighting for several days until an eighty-day period had passed, after which the fighting resumed (Durán 1994:475; Lockhart 1993:269).

The most crucial consultation, however, accompanied the washing and naming of infants. Children took as their formal name the day on which they were born, and they took the influences of this day as their destiny. That day and its companions influenced the child's future occupation and even determined what kind of person the child was likely to become. A generally favorable birth day brought rejoicing. An unfavorable birth day could perhaps be mitigated by delaying the washing ceremony to a better day and by making special offerings and performing devotional acts.

Sahagún (1953–1982, bk. 6:198) describes the process of reading out the destiny of a noble son (Fig. 10). Shortly after the child was born, the parents summoned the soothsayer to bring his books and read the child's fate. Gathered together in the family's house were the old men and old women: the parents' kinsmen who had been present through the birthing and the old women assisting the midwife and mother with their orations. The soothsayer first looked at the child and then began to open his books and survey the day signs.

Then he opened out, he looked at [the] books, at his paintings, his writings; he read, examined, looked at the day sign on which the baby was born, studied which were those related to it which gov-



Fig. 10. The soothsayer reads the fate of a child born on the day 10 Rabbit. Gold, jades, and feathers on the mat reflect the prophecy of riches. Florentine Codex, bk. 4, chapter 14 (vol. 1, p. 277v). Photograph courtesy of the Biblioteca Medicea Laurenziana.

erned there. If perhaps it was a bad day, perhaps good were its companions which governed there. This improved it.

Then he consulted the parents, the old men, the old women; he said to them: "Good is [the day sign] on which he was born. He will govern, be a lord, be a ruler." Or else he said: "He will have wealth." Or he said: "He will be brave, an eagle warrior, an ocelotl warrior, a valiant warrior; he will provide sacrificial victims; he will be in the military command; he will provide drink, he will provide offerings to the sun, to Tlaltecuctli." Or he would say to them: "The baby hath arrived at a bad time, in the time of an evil day sign. However, good are its companions, which govern there, for they help, improve, moderate the evil sign."

Then he established when it was to be bathed.

The bathing and actual naming usually took place four days later, unless the birth day was a particularly

inauspicious one, in which case the soothsayer would choose the best nearby day.⁴⁴ A child born on the evil sign of 1 Eagle, for example, would be named and washed on 3 Movement or, if the parents could wait, on 7 Crocodile, for these were good signs (Sahagún 1953–1982, bk. 4:113).

The ceremony of naming and bathing set the child on its future course and established the direction that its life would take. At this time, the midwife washed the child, the elders made long, eloquent speeches to ensure the child's well-being, and the child was presented with miniature implements of its future profession. To a boy they gave a little shield and four arrows to signal his future as a valiant warrior or perhaps also the implements of an artisan, such as the paintbrushes and paper of the manuscript painter or the tools of a featherworker. To a girl they gave implements of weaving and the house: a spindle, cotton, spinning board, sweeper, and broom (Sahagún 1953–1982, bk. 4:3–4). The Codex Mendoza (Fig. 11) illustrates this ceremony by showing the aged midwife holding the child above the bowl of water. At the top are pictured the implements pertinent to the male child: the shield and arrows and the tools of the lapidary, the featherworker, the manuscript painter, and the goldworker. Below are the implements of the female child: the broom, spindle, and weaving basket. After the ceremony, the boy's umbilical cord was taken by a warrior and buried on the edge of a battlefield, where his future metaphorically lay; the girl's umbilical cord was buried at the edge of the hearth, for "the house was her abode." And thus the soothsayer, elders, and parents marked the paths the children would follow into adulthood.

The influences of the days, as powerful as they were, did not dictate the future absolutely; they revealed inclinations and tendencies. John Monaghan (1998:139–140) suggests that the twenty day signs and their destinies represented personality traits and orientations that distinguish individuals from one another, almost like a typology of personalities, covering the range from bravery to timidity, wealth to poverty, creativity to dullness, and so forth. There were "rugged day signs" (e.g., Jaguar) that helped to make one fearless, and other signs that brought timidity (e.g., Rabbit) (Sahagún 1953–1982, bk. 5:154, bk. 4:127–128). The destinies had to be cultivated, however, in order to be realized. The days imparted their charge to the child, but it was

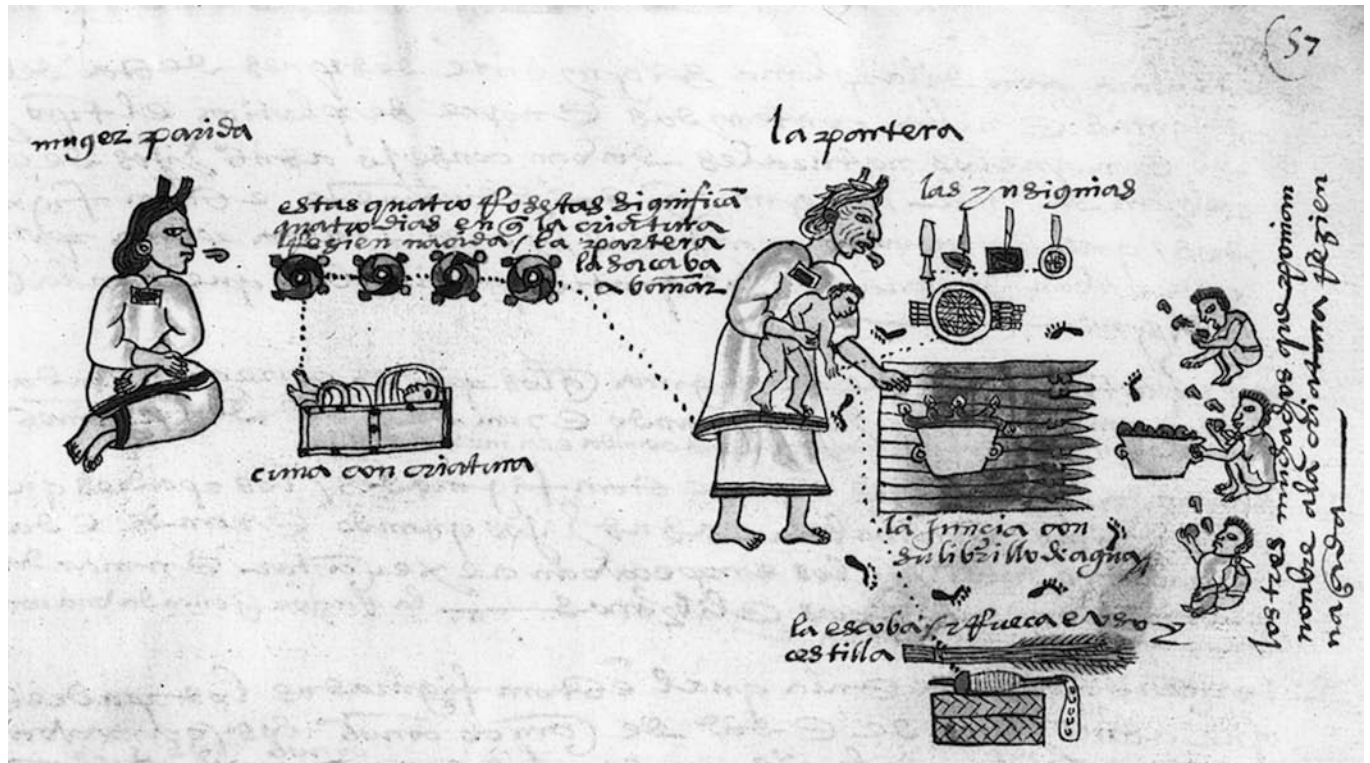


Fig. 11. An old midwife officiates at the washing and naming ceremony of a newborn child; the children on the right sing out the infant's name. Codex Mendoza 57r. Photograph courtesy of the Bodleian Library, Oxford.

up to the child and the family to accept and nurture the beneficial qualities or to guard against the negative ones. A child born on 10 Rabbit (Fig. 10) was fortunate and said to be of “great deserts, great gifts, and riches,” for the coefficient 10 was a favorable one. But this good fortune could be enhanced even more by bathing the child on 13 Monkey, which “greatly strengthened . . . [and] improved his day sign” (Sahagún 1953–1982, bk. 4:53).

The chroniclers such as Sahagún, Durán, and one of the annotators of the Codex Telleriano-Remensis speak of the fates on one level as being good, bad/evil, and indifferent/variable. They often disagree on which day has which meaning, however; and when they describe the actual properties that accompany the days, the meanings are much more nuanced and balanced. The influences for a single day came from several sources: the twenty day signs brought one set of meanings, the numerical coefficients brought another, and the *trecenas* (thirteen-day periods) carried their own.⁴⁵ Human action and status as a noble or commoner also

played important parts. According to Sahagún (1953–1982, bk. 4:5), for example, the day 1 Jaguar, key to the second *trecena*, was “an evil day sign, one of fierce beasts”; a man born then would die in war or be taken prisoner, commit adultery, and descend into slavery, *unless* he was diligent and vigilant and made the proper penances, and so forth, in which case he “rose to honor” and emerged as a great and brave chieftain. The day 1 Rabbit, key to the twentieth and last *trecena*, was called a good day sign, bringing riches to a person who labored industriously and carefully tended to business or to the fields, *but* “everything frightened him.” The four days that begin the third *trecena* of 1 Deer show the range. The day 1 Deer, perhaps because it was the birthday of the great Texcocan ruler Nezahualcoyotl, was a good one. If a noble, he became a ruler and gained fame; if a commoner, he was a valiant warrior or otherwise became a success and was esteemed by all, but he was also “exceedingly timorous” like the deer. Those born on the day 2 Rabbit, the name day of the pulque gods, did nothing but drink pulque all the time

and thereby reduced their families to poverty. The day 3 Water meant that one's wealth would come easily but would just as easily flow away. A person born on 4 Dog would prosper without great effort; and if he were to raise dogs, he would thrive: "How can it be otherwise? The dogs share a day sign with him" (Sahagún 1953–1982, bk. 4:9–20).

Divination, however, was not a simple one-step process, as much as Sahagún's written account might make it seem. It was a complex performance in which the patron, the diviner, and the codical *tonalamatl* all interacted. The process required the diviner to interrogate both the patron and the book in a dialogue that united the personal experiences and situation of the patron with the knowledge of the spirit world encoded in the painted record. From the book the diviner drew information from multiple almanacs, for a single almanac could never fully serve. Each gave only a piece of the equation; it might inform about the forces relevant only to the day signs or only to the numerical

coefficients. Other almanacs provided complementary and sometimes contradictory information about concurrently running cycles that were no less important. The days 3 Water and 4 Dog, for example, were not simply controlled by their day signs Water and Dog; they also came under the influence of their coefficients 3 and 4, and the *trecena* (the *trecena* of 1 Deer) that they shared. These coefficients, day signs, and *trecena* additionally participated in other cycles and were governed by the forces relevant to those as well. The diviner had to compile and sift data about all the pertinent cycles, weighing the divergent information against each other in order to reach a fully balanced fate. Divination was not a simple act of reading but was fundamentally a work of judgment and interpretation, where the diviner mediated between the spirit world and the concerns of the individual who sought guidance. The ever-present forces were revealed in the divinatory book, but it was the responsibility of the calendar priest to draw out and shape them into a sound prognosis.



The Symbolic Vocabulary of the Almanacs

When the calendar priest opened the stiff pages of his *tonalamatl* to seek a fate, he was confronted not with a phonetically referenced text that provided a single answer but with a diverse array of figures and symbols organized in complex and intricate arrangements. These figures and symbols, as well as their configuration, encoded the knowledge he sought, and it was his task to pull it out. Years of study in the *calmecac* had trained him to do this, for there he learned from the masters the graphic vocabulary, visual metaphors, and structural syntax of the *tonalamatls*. The process of identifying a fate was not merely an act of reading and voicing a message. It required the diviner to recognize the discrete elements that compose an almanac and to note how they were spatially associated with each other. The diviner had to recall the range of their meanings and choose the correct meaning within each specific context. Having achieved this in one almanac, he had to consult the other, complementary ones, ultimately weighing each meaning against all the other meanings similarly gathered. By this complex process of recognizing, sifting, and judging, the daykeeper achieved a richly textured and carefully crafted reading that fit the situation before him.

Writing in central and southern Mexico—as represented by the historical and religious codices—was

fundamentally pictorial. Although to the east the Maya had developed a hieroglyphic script to represent words logographically and syllabically and to reproduce phrases and sentences, the Aztecs, Mixtecs, and their neighbors did not. Instead, their writing consisted of images that are spatially organized in various ways to create visual messages that sometimes parallel spoken language but do not usually record it. The goal was not to fix a spoken text by providing phonetic details but to formulate and store complex information through conventional images (Jansen 1988a:89). The process of interpreting these images can create a verbal text that coincides in content, but not in form, with the pictorial message.

The system's vocabulary is graphic. Its elements appear as figural representations ("motivated" elements that look like what they represent) and abstract symbols ("arbitrary" elements that do not resemble their referents). In Peircean terms they are *icons* and *symbols* (Peirce 1931–1958, 1:369). The *icon* "exhibits a similarity or analogy to the subject of discourse"; the association of an image with its meaning is visually transparent within the culture in which it operates. The *symbol* "signifies its object by means of an association of ideas or habitual connection"; here meaning is even more culturally governed by the knowledge and ex-

periences shared by the viewing population. Bridging these classes of images are *indexical* elements, which refer to what they signify (by metonymy, synecdoche, or instrumentality), where a single element or attribute points to the whole. In Mexican pictography, these categories very often overlap, for an icon can carry a surface meaning that situationally calls up indexical and symbolic associations. In such cases, the context ultimately determines meaning.

The syntax that brings order to these elements and that helps to define them by shaping their context is a grammar of space. Meaning is crafted by organizational structures that govern the spatial arrangement of the elements. The placement of the icons, indexes, and symbols matters. Not only does it record the systematic relationships between the parts, but it can also determine how the images themselves are to be read. It establishes which elements are linked to which other elements, which are categorically independent, and the quality of such linkages. Like so many systems of communication—spoken language and algebraic notation, for example—the identity of an element (be it a word or an image) is both culturally grounded and governed by the principles of the discourse in which it operates.

Brian Rotman (1993: 26) makes this argument in his study of mathematical writing and analysis. He points out that “an ideogram—‘1,’ say—can be spoken and named in speech—‘one,’ ‘un,’ ‘eins’ . . .—but its manner of functioning in mathematical discourse, the meaning it creates, the forms of significant mathematical content it facilitates and gives rise to, is configured internally. It operates not in terms of all these different spoken names but through its conformity to the rules, arithmetical protocols and narrative presuppositions governing the signs for ‘number.’” This symbol “1” assumes one of a number of meanings depending on where it appears in a formula, for its location relative to the other parts determines what kind of symbol it is. The images in Mexican manuscripts are similarly governed by the syntax of their almanacs and, indeed, by the discourse structure of the entire divinatory system.

In oral and written language, words carry meaning according to their function within their grammar. Words, like images and graphic symbols, are “defined by their interconnections,” to use Geoffrey Sampson’s (1985: 12) phrase. Sampson notes that “[w]hat gives any particular element of a language its role in the

language is not its superficial physical properties but, rather, the relationships it enters into with the other elements of the language.” In this respect, nouns, for example, function similarly because they are structural equivalents. They are not equipollents, however, and cannot be casually swapped. Sampson (1980: 150) gives the example of nouns that should structurally be interchangeable but are not because of their context; their context necessitates only nouns of a certain kind. In the sentence “The quality of mercy is not strained” the word “brightness” can be substituted for “mercy” (“The quality of brightness is not strained”) but the word “dog” cannot (“The quality of dog is not strained”). All are nouns, but “dog” is not qualitatively like “mercy” or “brightness.” As Sampson (1980: 150) notes, “membership in a common syntactic category implies not identity but only broad similarity between the respective environments in which various words can grammatically occur.”

These two examples from mathematical notation and oral and written language make the point that it is not enough merely to identify the visual images in a graphic system of communication. The meaning of these elements is also determined in part by their place within the syntax of the system. This is certainly true for the divinatory books, where the figure of a serpent may always be a serpent, but its location in an almanac determines whether it is to be read iconically (as an offering), indexically (as a qualitative element), or symbolically (as a day sign). One must recognize the formal relationships between graphic elements in order to reach their intended meanings. Understanding requires knowledge both of the elements and of their syntactic function within the larger system. The spatial syntax of the almanacs is analyzed in Chapter 4. This chapter considers the elements themselves.

The religious codices are more purely representational and less conventional than are most of the other ancient Mexican books. In the painted histories, stories are told through the repeated use of a relatively limited range of conventional representations: the conventions for birth, parentage, accession to office, marriage, conquest, and the like carry the story along. As time passes, the actors, locations, and details of action naturally change, but they do so within the circumscribed canons of the genre. In contrast, the divinatory codices cover a much greater range of topics, embrac-

ing the cosmic structure of the world, the supernaturals who rule it, still-mysterious mythical events, natural forces, food production and procurement, birth and marriage, and rituals and offerings to ensure that the world continues to run in balance. Opinions and facts about these topics are expressed by the figuration of supernaturals, humans, and animals, who either appear as singular icons that convey meaning or participate in scenes of action. These topics are also explored by the unanimated appearance of implements and artifacts that function as referents to actors, actions, times, and places. Painters of the religious codices thus conveyed meaning both by creating scenes of action and interaction and by allowing the collective appearance of independent visual elements to create a message. Implements and accoutrements can carry the same meaning regardless of whether they are held and used by supernaturals or simply float independently on the picture plane (Reyes García 1997: 25).

The difficulty for the modern reader, as for the pre-conquest diviner, is first to identify the images and then to recognize their intended meaning. Very many images function not just to represent their object but to encode by analogy, metonymy, and metaphor. On the surface, many meanings are clear: a turquoise blue-green bird with long tail and short crest is a quetzal, a shy bird whose homeland is tropical Guatemala (Fig. 22d). But the central Mexicans highly prized the quetzal and considered it a symbol of preciousness and of wealth. Its appearance on the backpack of a richly dressed merchant (Fig. 37) might therefore signal a successful trading venture, or it might mean richness and prosperity in other aspects of life. When embraced by a woman in a marriage almanac (Fig. 82a), the quetzal probably signals her virtue, fidelity, or worth in the face of an errant husband. Standing on a cosmic tree (Figs. 71, 73, Plate 7), the quetzal probably signals prosperity. Clusters of its tail feathers are featured in the headdresses of many supernaturals, especially (but by no means limited to) solar deities and, of course, the multivalent culture hero Quetzalcoatl, as well as Xochiquetzal, goddess of youthful fertility, both of whom have “quetzal” in their name. The dilemma is to know when such quetzal feathers are functioning principally as fairly common elements in a headdress and when they are more specifically exhibiting qualities associated with the quetzal. The challenge of read-

ing the Mexican divinatory codices is not only to learn the identity of the images but to understand on what level to interpret them. As Maarten Jansen (1988a:99) has urged, interpretations must be framed fully within the genre being analyzed and must consider coherent clusters of data rather than isolated elements. Thus, the meaning of quetzal feathers is defined by their specific frame of reference, by the other imagery with which they are associated. Encoded meanings come in shades and multiples, and they can only be correctly read within their pictorial context.

Although the iconography of the divinatory codices cannot be fully explained here—and, indeed, is not completely known—most of the images in the almanacs can be identified, at least on their surface level. We must begin at this level but acknowledge that deeper meanings have still to be pursued.¹ The imagery in the almanacs can be loosely divided into five categories. The principal ones are (1) the calendrical elements (including day signs, numbers, and dates) to which all the divinatory elements refer, and (2) the actors (supernatural, human, and animal) and their actions that represent gods, forces, and events. Other, subsidiary elements qualify the actors and actions: (3) scenic markers locate the actors and actions within a particular realm or environment; (4) accoutrements adorn and are manipulated by the actors (they are often the stuff of the action); and (5) relatively independent symbols and signifiers proffer qualifying or separate meanings.

Calendrical Elements

Calendrical elements include the twenty day signs, the thirteen day numbers, spacers that stand in for day signs, and actual day and year dates. The almanacs implicitly break down the 260-day calendar into its two components—the twenty day signs and the thirteen day numbers—by focusing on one or the other but not often on both together. Almost always the almanacs link mantic elements to the twenty day signs, which loads the day signs with the greatest divinatory burden. Only a few almanacs focus specifically on the thirteen day numbers; often the day numbers are simply implied by the sequence of the day signs rather than represented visually. Spacers come into play when an almanac does not represent all the day signs in sequence

but employs disks or what I call “spacers” to stand in for the unpainted day signs. Actual day names (composed of both a day sign and day number together) are employed in all the Aztec almanacs but are only occasionally used in the Borgia Group. Actual dates (composed of both a day name and a year name) occur only in three almanacs, which means that most of the almanacs are tied solely to the *tonalpohualli* but not to the civil year or *xihuitl* (a year of 365 days that approximates a solar year); they thus float in historical time.

Day Signs

The twenty day signs are images of animals, a few plants, natural features or forces, and a human construct (Fig. 12). Half of all the day signs are faunal: the beasts range from the tropical Crocodile, Monkey, and Jaguar to the ubiquitous Lizard, Serpent, Deer, Rabbit, Dog, Eagle, and Vulture (represented by the king vulture). Three signs are floral: Grass (a zacate grass often used for ropes and nets), Reed, and Flower. Natural features or forces include Wind, Death, Water, Movement, Flint, and Rain. The human built sign is House. We do not know how these images came to stand for the day signs, because the calendrical system underlying them is ancient.² They are arbitrary symbols that identify twenty sequent days. Those who have studied the divinatory codices have usually designated the day signs by their Nahuatl names, which have been well known since they were recorded in the sixteenth century. The Mixtecs and the speakers of other central Mexican languages voiced them differently, of course, but specialists in the Mixtec historical codices have usually employed English and Spanish terms. I use English terms for the day signs in this study to remind us that the extant divinatory codices were created and used by speakers of different languages.

Generally the signs are uncomplicated iconic renderings: Eagle looks like an eagle, for example, and Serpent is clearly a serpent. But because other signs are not so easily read, and because there is variation in their imagery, it may be helpful to review the features of some signs.

All the faunal signs generally appear as the animal's head seen in profile. Crocodile (distinguished by its great sharp teeth, spines, and pronounced supraorbital plate) never has a neck, but in Borgia Group codices the

other animals usually have a red band at the neck to signal where the head was severed. Serpent (distinguished by curved fangs and tongue) usually shows even more of its body, as if the head and upper part of the serpent had been chopped from the rest. In all the divinatory codices, Lizard appears not as a head but as the full figure of a lizard.³ In the Aztec codices and in the Codex Borgia, Serpent is also shown in its full body, usually coiled or undulating to shorten its length. Dog is conventionally white, with a black spot around the eye and often with a chewed ear. Monkey and Vulture conventionally wear an elaborate ear ornament.

Of the floral signs, Grass is the most visually problematic. The sign involves not just grass but also teeth or a toothy defleshed mandible. Aztec codices emphasize the grass, but Borgia Group documents emphasize the mandible, which often has an extruded eye rising from the teeth. In the Fejérváry-Mayer and Laud, Grass is sometimes represented solely by a mandible without any grass whatsoever. Seler (1900–1901:12) and Caso (1967:12) explained this substitution by pointing out that this day sign is called “tooth” or “teeth” by the Huastecs, Matlatzincas, Mixes, and Maya; apparently it was a sign in flux.⁴ Reed, represented in Aztec codices by the stalk and leaves of the cane, is pictured in the Borgia Group codices as the cane shaft of a spear with its feathery adornments.

Among the natural forces, Wind is the profile face or merely the buccal mask of the Wind god Ehecatl.⁵ Death appears as a skull with a round death-eye, with or without a mandible. Water is a contained basin of water in Aztec manuscripts, whereas in Borgia Group codices it flows out the side of a basin or edge, often with an added eye, which visually transforms the edge into a profile mouth.⁶ Movement is a conventional X-shaped form or twist; Rain is the face of the rain god characterized by his circular “goggle eye,” scrolled lip-nose element, and fanged teeth.

Usually these signs appear in these standardized ways, but occasionally the manuscript painters chose to elaborate the signs in an individual almanac (e.g. Borgia 9–13, 18–21). In this case, the animals become full-figured, Grass becomes florally abundant, and Flint acquires either the striped body of a sacrificial victim (Borgia) or the black body of a priest or supernatural (Cospi Obverse; Fig. 91, Plate 9). In several codices the painters occasionally abbreviate day signs, reducing

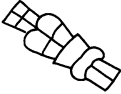
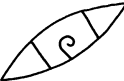
	Codex Fejérváry-Mayer	Codex Borbonicus		Codex Fejérváry-Mayer	Codex Borbonicus
Crocodile			Monkey		
Wind			Grass		
House			Reed		
Lizard			Jaguar		
Serpent			Eagle		
Death			Vulture		
Deer			Movement		
Rabbit			Flint		
Water			Rain		
Dog			Flower		

Fig. 12. Day signs in the Codex Fejérváry-Mayer and Codex Borbonicus. Drawings of Fejérváry-Mayer by Heather Hurst, drawings of Borbonicus by John Montgomery.

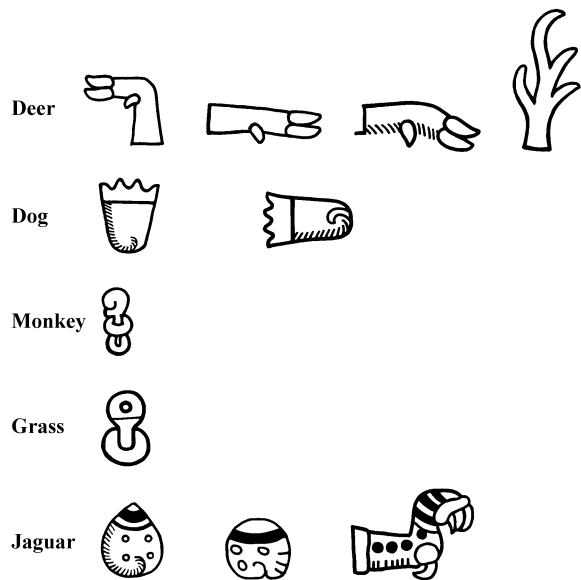


Fig. 13. Abbreviated day signs: Deer, Dog, Monkey, Grass, Jaguar. Drawings by Heather Hurst. *Sources*: Deer, Fejérváry-Mayer 36, 34, Laud 45, Fejérváry-Mayer 20; Dog, Fejérváry-Mayer 36, Laud 45; Monkey, Fejérváry-Mayer 36; Grass, Fejérváry-Mayer 20; Jaguar, Fejérváry-Mayer 36, Cospi 29, Vaticanus B 4.

them to their most salient points (Fig. 13). Thus, Jaguar becomes its spotted ear or spotted claw, Dog its chewed ear, Deer its cloven hoof or antler, and Monkey its ear and pendant ear ornament. Curiously, Grass becomes neither grass nor tooth but is distilled to only the extruded eye.⁷

As symbols for the twenty days in a repeating cycle, the day signs bear no a priori relation to the days they name. The day signs do carry meaning, however, which the divinatory system then assigns to their day. Jaguar days, for example, will always carry the multiple meanings and associations that the divinatory system assigns to Jaguar.

Day Numbers

The day numbers 1 through 13 regularly accompany the day sign in the Aztec *tonalamatls* and in a few Borgia Group almanacs (e.g., Venus almanacs). Otherwise in the Borgia Group the numbers are featured separately (Borgia 58–60, 71, Laud 33–38, Vaticanus B 42b–33b; Figs. 55, 80–82, Plate 4) or not at all. In all the divina-

tory codices the numbers are represented by a series of disks (Fig. 14), rather than by the bars and disks used by the Maya.⁸ Usually the disks are joined side by side, although sometimes they are slightly separated. Numbers 1 to 6 often appear in one linear grouping, but higher numbers are often grouped in linear sequences of five. In this way the graphic expression of numbers parallels their linguistic expression, where five is implicitly a base (e.g., $8 = 5 + 3$, $9 = 5 + 4$, $11 = 10 + 1$), as explained in Chapter 2.⁹ For these larger numbers, either the line of disks bends at or after the fifth or two or three separate lines of disks are linked together. Different manuscript painters had different preferences. There is just as much variation in the color of the disks as there is in their arrangement. The Borbonicus has consistently red disks, but most other codices vary the colors within almanacs and between almanacs. The reasons for these variations in color are not known, and I have been unable to determine a clear pattern. The varied colors appear arbitrary but may, in fact, encode meaning.

Spacers

When a series of separated disks appears in an almanac, the disks usually do not signal day numbers. Instead they are functioning as “spacers” or replacements that stand in for day signs that are not pictured (Fig. 15). Forty-three of the almanacs in the Borgia Group employ spacers in this way. Spacer disks are never joined together; the space between them signals that they are each to be read as an individual calendrical unit. Spacers in the Borgia and Aubin No. 20 are always red; in the Laud, Fejérváry-Mayer, and Vaticanus B they vary in color. As is the case with numerical disks, we do not know the meaning, if any, of the color variations.

Day Names and Dates

Complete day names, composed of a day sign and day number combination, are a feature of all the Aztec *tonalamatls*, where the thirteen days of each *treceña* are represented by both their signs and numbers. But day names seldom form the calendrical basis of Borgia Group almanacs. The exception is the Venus almanac (Borgia 53–54, Cospi 9–11, Vaticanus B 80–84; Figs. 90, 91, Plate 9), where full day names are required to

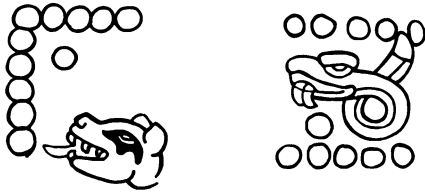


Fig. 14. Day numbers with day signs: 11 Dog, 11 Serpent. Drawings by Heather Hurst. Sources: Borbonicus 4, Borgia 54.



Fig. 15. Spacers employed as markers for the second and third days (Wind, House) and the fifth through eighth days (Serpent, Death, Deer, Rabbit). Drawings by Heather Hurst. Source: Fejérváry-Mayer 23.

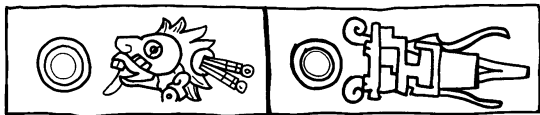


Fig. 16. Day date 1 Monkey and year date 1 House, the year identified by the AO sign. Drawings by Heather Hurst. Source: Borgia 27.

locate the various units within the larger 260-day cycle. Only three other almanacs in the Codex Borgia (and cognates in the Vaticanus B) are calendrically tied to day names. Two of these (Borgia 27 and 28 and Vaticanus B 69, which pertain to rain and agriculture) also employ year dates, signaled in the Borgia by the Mixtec “AO” year sign (a ray crossed by a trapezoid) but left unmarked in the Vaticanus B (Figs. 16, 87, 88, Plate 8). The use of day dates and year dates together suggests that these almanacs may be tied to historical time, and indeed Anthony Aveni (1999), Victoria Bricker (2001), and Christine Hernández (2004, 2006, n.d.; Hernández and Bricker 2004) have argued that they can be fixed in real time. As discussed in Chapter 5, canonical year dates (e.g., 1 Reed) may refer both to a specific year (e.g., 1467) and to a particular quarter of the 52-year cycle.

Day names and year dates rarely appear within the mantic cells of the almanacs. When they do, in some in-

stances the day name is the calendrical name or feast day of the supernatural, but in other cases its temporal or symbolic value is unclear. All the protocols for rituals use day names to specify when the ritual is to be performed. Only once does a year date figure in a mantic cell of an almanac—1 Reed with the sun god on Borgia 71 (Fig. 55, Plate 4)—where it is probably a metaphoric expression of “beginning.”¹⁰

Actors and Actions

Although the calendrical elements are arranged in different configurations to form the armature of each almanac, the meanings attached to these elements are primarily conveyed by a host of sacred and mundane beings. I term them “actors,” because when they are not simply presenting themselves disinterestedly in the almanacs (and thus conveying information by their very presence) they are carrying out activities that provide meaning for the augury. The great majority of these beings are supernaturals—gods and aspects of gods—who usually appear elaborately costumed and in anthropomorphic form. These deities carry the greatest load of mantic information, but humans and even animals also participate to offer accessory information.

Supernaturals

Every almanac in the divinatory codices involves one or more supernaturals as the governing force behind the calendrical unit.¹¹ When these supernaturals are associated one-on-one with individual units, they are generally considered the “patrons” of the calendrical units and called “lords” of that period of time, as in “patron of the fourteenth *trecena*,” or Lord of the Night and Lord of the Day. They are the forces that characterize or shape all that occurs during that particular unit of time.

The supernaturals maintain their distinctive and identifying iconography across all the divinatory codices: the rain god in one codex has the same general attributes that he does in another. This tells us that these deities, in their general features, had a wide distribution in late Postclassic central Mexico; they were shared by peoples who spoke different languages and very likely called the deities by different names. For most deities, however, we only know the Nahuatl versions of their

names, because we lack for the Mixtecs, Popolocas, Chochos, Otomis, and others the extensive ethnohistorical record that we have for the Nahuas. More specifically, the Nahuatl names of the patrons of many calendrical units are known because they were written down in the sixteenth century by the scribes who annotated the *tonalamatl* painted in the Codex Telleriano-Remensis; these scribes' notes were then amplified and translated into an Italian text in the Codex Vaticanus A/Ríos. Eduard Seler, whose iconographic study of the divinatory codices is the foundation for present interpretations, relied heavily on these scribal identifications and descriptions in naming the supernaturals. In this volume, I use the Nahuatl names of the supernaturals because these have become standard in the literature; but we must recognize that the names would probably have been voiced differently by speakers of different languages. Table 2 lists the principal supernaturals who appear in the divinatory codices, along with their realms and major visual attributes.¹² The listing includes several little-known deities.

Many of these gods are also pictured and discussed by other chroniclers of the Nahuatl-speaking Aztecs, including Sahagún, Durán, and the authors of the Codices Magliabechiano and Tudela. Most of the gods had active cults at the time of the conquest and were the focus of veneration on the occasion of the eighteen monthly feasts; the chroniclers therefore describe their images and their realms of control in some detail. Such are Tlaloc (god of rain) and Chalchiuhtlicue (Jade Her Skirt, goddess of groundwater), Tezcatlipoca (Smoking Mirror, diviner and patron of rulers), Tonatiuh (Sun), Quetzalcoatl (Feathered Serpent, a creator god) and Ehecatl (Wind), Xiuhtecuhtli (Turquoise/Year Lord, god of fire and the calendar), Tlazolteotl (Filth Goddess, goddess of childbirth and weavers), Mictlantecuhtli (Death Lord), and Centeotl (Maize Cob Lord) (Fig. 17).

Other calendrical patrons, however, seem to have had less active or more esoteric cults and escaped much attention from the chroniclers. Some of these were probably ancient gods like Tonacatecuhtli (Our Flesh [Maize] Lord, the principal creator deity, paired with the goddess Tonacacihuatl), Itzpapalotl (Obsidian Butterfly, an ancient warrior goddess), and Huehuecoyotl (Old Coyote, a god of lust, dance, and music). Others seem to pertain to relatively obscure realms, such as

the related beings Ixquimilli (Eye Bundle, a god of sacrifice) and Itztlacoliuhqui (Curved Obsidian Blade, a god of frost) or Chalchiuhtotolin (Jade Turkey), who appears only in the calendar. These lesser-known gods have often been called "calendar gods" because we know about them principally through their appearance in the divinatory calendar (Nicholson 1971b:412, 418; Quiñones Keber 1995:157).

Conspicuously absent from the corpus of major gods in the divinatory codices is Huitzilopochtli (Hummingbird on the Left), the principal Mexica Aztec deity and solar god of war. As the Mexica tribal patron, Huitzilopochtli was introduced late into the milieu of central Mexican ideology, probably long after the gods and governing forces of the *tonalpohualli* were fixed. The Mexica god bearers carried his cult bundle throughout the long migration into the valley of Mexico; and as Mexica power and fortunes rose audaciously under Huitzilopochtli's guidance, they elevated him to supreme status (Brotherston 1974; Boone 1989). But all this came too late to influence the sacred count of 260 days or the divinatory apparatus that had long attended it. Instead, the divinatory calendar retains what are probably archaic gods along with the then-current ones.

Visually the supernaturals are identifiable primarily by their facial paint, body coloring or body suit, and headdress. Other characteristic features are found within their clothing and their jewelry, where nose ornaments, ear ornaments, and pectorals carry the most signage. Tezcatlipoca, for example, is characterized by black and gold horizontally striped face paint, a smoking mirror generally in his headdress or at his temple (but also in place of a foot), and a white and red circular (shell) pendant (Fig. 17). Quetzalcoatl (Feathered Serpent, the prototypal priest) has the black body of a priest and a face painted black, red, and gold; he wears earrings of curved shell and a pectoral of a sliced conch shell, and his headdress (often conical) usually has a bone bloodletter thrust into it. As the wind, Quetzalcoatl/Ehecatl wears the red buccal mouth mask from which the wind was blown. Tlaloc (the rain god) has a range of visual attributes, the most significant of which are his black body and face paint and his goggle eyes and fanged mouth.

With the exception of face paint and such unique features as Tlaloc's goggle eyes and Ehecatl's wind mask,

Table 2. THE MAJOR SUPERNATURALS WHO APPEAR IN THE DIVINATORY CODICES

Male Deities

- Tonacatecuhtli, “Our Flesh [Maize] Lord”: principal creator deity with his female counterpart, Tonacacihuatl; patron of day sign Crocodile and first *trecena*/Crocodile. Attributes: red or yellow face and body paint, jeweled nose rod and bird-head fillet shared with Tonatiuh, jeweled pendant, aged (Quiñones Keber 1993).
- Xiuhtecuhtli, “Turquoise [Year] Lord”: god of fire, time and the calendar; Night Lord, patron of number 1, day sign Water, ninth *trecena*/Serpent, and twentieth *trecena*/Rabbit. Attributes: usually red face paint always with horizontal black band through eye, fillet with two short and upright eagle feathers, turquoise pendant (Heyden 1972; López Austin 1987).
- Tezcatlipoca, “Smoking Mirror”: patron of rulers and divination; patron of number 10. Attributes: black and yellow horizontally striped face paint, smoking mirror, red and white circular pectoral (Nicholson 1955; Olivier 2003).
- Tepeyollotl, “Hill Heart”: aspect of Tezcatlipoca, jaguar manifestation of the heart of the earth and caves; Night Lord, patron of day sign House and third *trecena*/Deer. Attributes: jaguar form, sometimes with smoking mirror and pendant of Tezcatlipoca, associated with cave or hill (Olivier 1998).
- Xipe Totec, “Flayer God,” also called the Red Tezcatlipoca: solar god associated with war; patron of day sign Eagle and fourteenth *trecena*/Dog. Attributes: wears flayed skin, skin mask often marked by curved vertical line through eye, red and white streamers that end in swallow tail points (Barnes 1997; Vié-Wohrer 1999).
- Chalchiuhtotolin, “Jade Turkey”: thought to be aspect of Tezcatlipoca; patron of day sign Flint and seventeenth *trecena*/Water. Attributes: turkey form, heavily covered with jades, sometimes has coloring and smoking mirror of Tezcatlipoca.
- Tecciztecatl, “Conch Shell Lord”: moon god, perhaps related to Tezcatlipoca; patron of day sign Death and sixth *trecena*/Death. Attributes: similar to sun god but has conch shell at front of his fillet.
- Quetzalcoatl, “Quetzal-Feathered Serpent”: creator god and culture hero, brought corn to humankind, patron of learning and healing; patron of number 9, day sign Wind, and 2nd *trecena*/Jaguar. Attributes: face paint of red, black, and yellow, often with beard, shell necklace, pendant of sliced conch shell, curved shell ear ornaments, conical headdress of jaguar pelt and bone-flower with hummingbird attached (Nicholson 1978; Quiñones Keber 1988).
- Ehecatl, “Wind”: wind manifestation of Quetzalcoatl; patron of number 9. Attributes: same as Quetzalcoatl but with buccal mask through which wind is blown.
- Xolotl, “Monster”: twin of Quetzalcoatl; patron of day sign Movement, sixteenth *trecena*/Vulture. Attributes: stocky canine form, shares attributes with Quetzalcoatl (Quiñones Keber 1991).
- Tlahuizcalpantecuhtli, “Dawn Lord”: aspect of Quetzalcoatl as the planet Venus, malevolent tendencies; patron of number 12, and ninth *trecena*/Serpent. Attributes: dark/black face paint with four white squares around the edges, flints in fillet and stiff black feathers in headdress.
- Mictlantecuhtli, “Death Lord”: lord of Mictlan and death; Night Lord, patron of number 6 and (in Chalmecatl aspect) 11, day sign Dog, and tenth *trecena*/Flint. Attributes: skeletal form, white body paint, white paper rosettes in headdress and back assemblage, “wild” hair.

Table 2. CONTINUED

Ixquimilli, “Eye Bundle”: related to lust and sacrifice, merges with Itztlacolihqui; patron of day sign Reed. Attributes: white and black face paint, eyes covered with a group of sacrificial knots (Sullivan 1976).
Itztlacolihqui, “Curved Obsidian Blade”: god of frost, associated with maize gods and fertility, merges with Ixquimilli; patron of twelfth <i>trecena</i> /Lizard. Attributes: white and black vertical face paint, white body paint, curved conical headdress with serrated edge, eyes covered (Sullivan 1976).
Itztli, “Obsidian,” and Itztapaltotec, “Obsidian Lord”: deified obsidian; Night Lord and patron of twentieth <i>trecena</i> /Rabbit. Attributes: personified obsidian knife.
Tlaltecuhli, “Earth Lord”: bisexual manifestation of the earth; patron of number 2. Attributes: frontally posed with arms and legs flexed as if crouching and open mouth up, “wild” hair (Matos Moctezuma 1997; Boone 1999).
Tlaloc: storm and rain god; Night Lord, patron of number 8, day sign Deer, and seventh <i>trecena</i> /Rain. Attributes: black face and body paint, turquoise eye goggles and curved lips, fanged mouth, rubber spattered paper on costume, blue costume (Klein 1980; Heyden 1984).
Centeotl, “Maize Cob Lord”: god of maize and secondarily of feasting; Night Lord and patron of number 7. Attributes: corn in headdress, red parrot helmet, yellow and/or red face paint.
Tonatiuh, “Sun,” and Piltzintecuhli, “Prince Lord”: manifestations of the sun; Night Lord, patron of number 4, day sign Rain, and tenth <i>trecena</i> /Flint. Attributes: red or yellow face paint, often with semicircle as a bridge embracing both eyes, jeweled nose rod, sun disk, golden bird fillet, yellow hair.
Xochipilli, “Flower Prince”: god of young corn and feasting/pleasure, also a youthful solar being; patron of day sign Monkey. Attributes: red parrot helmet, yellow and/or red face paint, often with white around the mouth, jeweled nose bar of solar gods, bird-headed fillet of solar gods.
Macuiltonaleque, “Five Tonaleque”: five solar beings associated with feasting, of whom Macuilmichitl (“Five Flower”) is the most prominent. Attributes: white handprint around the mouth; appear in a group of five.
Huehuecoyotl, “Old Coyote”: god of lust and pleasure, associated with song and dance; patron of day sign Lizard and fourth <i>trecena</i> /Flower. Attributes: coyote form with horizontally curved band through the eye, pointed oval shell pectoral and ear ornaments, necklace of strung shells (Olivier 1999).
Ometochtli, “Two Rabbit” and Patecatl, “Medicine Lord”: pulque gods; patron of day sign Grass and eleventh <i>trecena</i> /Monkey. Attributes: red and black face vertically divided at cheeks, curved nose ornament, pointed diadem, rectangular blue-green earrings, <i>malinalli</i> or curved shell pectoral (Nicholson 1991).
Mixcoatl, “Cloud Serpent,” also called Camaxtli (patron of the Tlaxcalteca and Huejotzinca): god of the hunt. Attributes: black mask around eyes, red and white striped face and body paint, twin heron feathers in head-dress, hunting bag.
Yacatecuhtli, “Nose Lord”: merchant god. Attributes: large bulbous nose, merchants’ staff and backpack (Thompson 1966).

Table 2. CONTINUED

Female Deities

- Chalchiuhtlicue, “Jade Her Skirt”: goddess of groundwater; Night Lord; patron of number 3, day sign Serpent, and fifth *trecena*/Reed. Attributes: stepped turquoise nose ornament or double-headed serpent nose ornament, jades in skirt.
- Chicomecoatl, “Seven Serpent”: maize goddess. Attributes: corn cobs in headdress, large rectangular headdress (“tower of paper”).
- Mayahuel: manifestation of maguey plant; patron of day sign Rabbit and eighth *trecena*/Grass. Attributes: curved nose ornament, maguey plant (Nicholson 1991).
- Xochiquetzal, “Flower Quetzal”: youthful fertility goddess; patron of day sign Flower and nineteenth *trecena*/Eagle. Attributes: quetzal helmet, flowers in headdress, curved jade nose ornament.
- Cihuacoatl, “Serpent Woman,” and Ilamatecuhtli, “Old Lady”: mother goddess, with malevolent associations; patron of number 13. Attributes: skeletal head or jaw, “wild” hair, often with banners of sacrifice (Heyden 1969; Klein 1988).
- Tlazolteotl, “Filth Goddess”: goddess of childbirth, patron of weavers, and absorber of sins; Night Lord; patron of number 5, day sign Jaguar, and thirteenth *trecena*/Movement. Attributes: black patch around mouth, headdress and ear ornaments of unspun cotton, often spindles in headdress (Sullivan 1982).
- Chantico, “In the House”: goddess of the hearth; patron of eighteenth *trecena*/Wind. Attributes: red head cloth decorated with white (down) balls, sometimes *atl-tlachinolli* (water-fire) in headdress, sometimes pointed ear ornaments shared with Coyolxauhqui (Nicholson 1985).
- Itzpapalotl, “Obsidian Butterfly”: ancient warrior goddess; patron of day sign Vulture and fifth *trecena*/House. Attributes: butterfly with obsidian knives on its wing tips, skeletal face or jaw (Boone 1999).
- Cihuateteo, “Goddesses”: souls of women who have died in childbirth, companions of the sun. Attributes: skull heads, “wild” hair, bare breasted (Sullivan 1966; Boone 1999).

a single visual attribute does not by itself usually serve to identify a specific deity every time that attribute appears.¹³ Instead, images or *teixiptla* of the deities are created of multiple costume elements and attributes that together combine to represent the sacrality or *teotl* of a god (Hvidfeldt 1958:76–100; López Austin 1983, 1987:262–271; Boone 1989:4–9). It is the aggregation of the face paint, headdress, and shell pendants that composes the image of Quetzalcoatl, for example. Deities with similar aspects will naturally share visual elements. Several kinds of headdress elements, leg and arm bands, and pectorals are shared by a wide range of supernaturals: for example, feathery pelt leg bands are shared by several malevolent and warrior beings, including the goddesses Cihuacoatl, Itzpapalotl, and

Chantico, as well as the gods Tlaltecuhli and Tlahuizcalpantecuhli. The natures of central Mexican deities are not circumscribed by fixed boundaries that delimit their realms of influence; instead the supernaturals are fluid beings with realms that tend to flow into or overlap those of others (Nicholson 1971b; López Austin 1983; León-Portilla 1992b). Many supernaturals known by separate names are merely different aspects of the same. Thus, Ehecatl is a manifestation of Quetzalcoatl and shares his iconography.

In most of the almanacs, the supernatural patrons are securely fixed to their individual calendrical units; so when the same almanac reappears in different codices, the same gods are linked to the same units of time. In this way, the almanac that gives the patrons of the

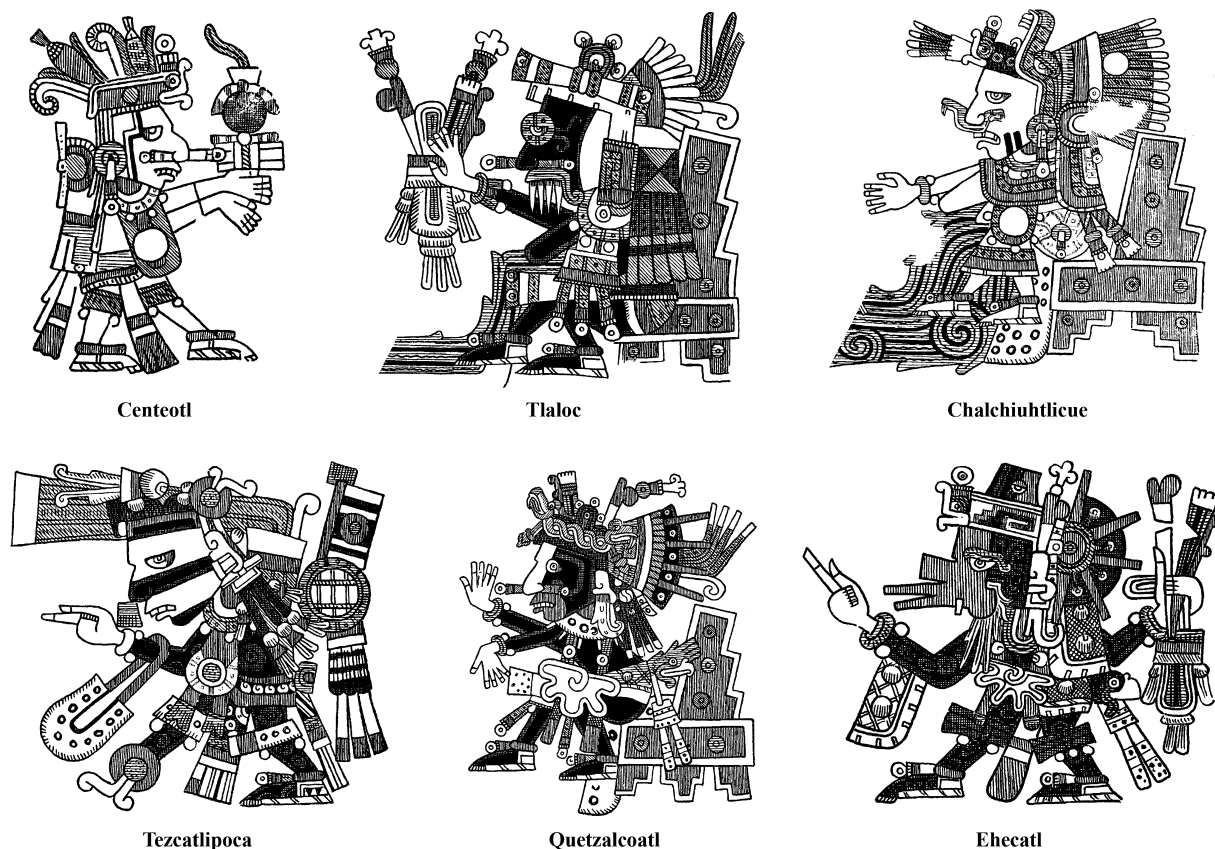


Fig. 17. Major gods who appear in the divinatory codices. *Sources:* Borgia 14, 19, 21, 50, 61, 62, 63, 65, 66, 67 (from Seler 1904–1909, 1902–1903:95, 97, 1902–1923, 4:135, 144).

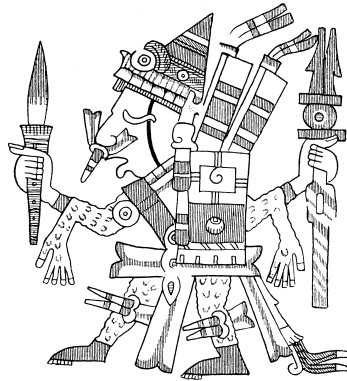
twenty day signs, for example, always presents Quetzalcoatl/Ehecatl (the wind god) as the patron of the second day sign Wind. Because some of these almanacs reappear in most of the extant divinatory books, we know fairly well who these patrons are. Eduard Seler (1900–1901, 1901–1902, 1902–1903) was the first to identify the patrons or governing supernaturals for the almanacs, and most scholars have followed his identifications. He identified four basic series of patrons, which reappear often: the nine Lords of the Night, the thirteen Lords of the Day (along with the Volatiles), the twenty patrons of the day signs, and the twenty patrons of the *trecenas*.

The Lords of the Night are a repeating series of nine deities who are sequentially assigned to each day; the series begins with Xiuhtecuhtli as lord for the first day, 1 Crocodile (Table 3, Figs. 52, 53).¹⁴ Their specific

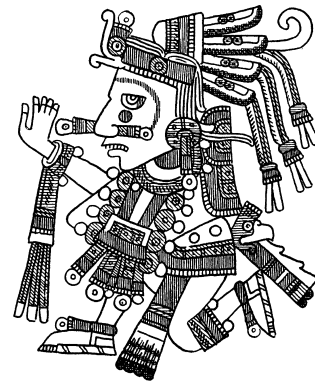
names are known, because the scribes of the Telleriano-Remensis (8r) and Tudela (98v–99r) glossed the images of these lords with their names; moreover, Jacinto de la Serna (1953:163–164) and later Antonio León y Gama (1832, 1:31; 2:11–15), who was following a sixteenth-century Nahuatl text, list virtually the same nine lords; Serna identified them as “Señores o dueños de la noche” who governed the hours from sunset to sunrise.¹⁵ Seler (1900–1901:22) interpreted this to mean that each lord had control of one of the hours of the night and thus one of the nine levels of the underworld, although there is no evidence to support this. Instead, it is more likely that the Night Lords sequentially controlled all the evening hours of successive days, which is how they are presented in the painted almanacs. This series of nine lords is an important one, because most of the extant divinatory codices include it (some multiple times).



Xiuhtecuhtli



Xipe Totec



Tonatiuh



Tlazolteotl



Mictlantecuhtli

Table 3. THE NINE LORDS OF THE NIGHT

ORDER	NIGHT LORD
1	Xiuhtecuhtli (Turquoise [Year] Lord)
2	Itztli or Tecpatl (Obsidian or Flint)
3	Piltzintecuhtli (Prince Lord, the sun)
4	Centeotl (Maize Cob God)
5	Mictlantecuhtli (Death Lord)
6	Chalchiuhtlicue (Jade Her Skirt)
7	Tlazolteotl (Filth Goddess)
8	Tepeyollotl (Heart of the Mountain)
9	Tlaloc (rain god)

The so-called Lords of the Day are less frequently found, appearing only in two Aztec sources (Tonalamatl Aubin and Codex Borbonicus). They compose a series of thirteen supernaturals who are associated with the thirteen sequent days in a *trecena*; thus they are implicitly associated with the numbers 1 through 13 (Table 4).¹⁶ This series likewise begins with Xiuhtecuhtli for the first day, 1 Crocodile. The *Histoire du Mexique* (Garibay 1979:103) lists these same supernaturals as the deities who occupied the thirteen levels of the heavens.¹⁷ Seler (1900–1901:31–34) believed they governed the hours of the day in a manner parallel to his notion about the Lords of the Night, one lord for each hour, but there is no evidence to support this. It is more likely that each lord controlled one of the thirteen days, or all the daylight hours of that day, in turn, which is the way they are presented in the almanacs. Usually the series of Day Lords is also accompanied by a parallel series of thirteen flying creatures, or Volatiles, com-

Table 4. THE THIRTEEN DAY LORDS AND THIRTEEN VOLATILES

NO.	SUPERNATURAL PATRON	VOLATILE
1	Xiuhtecuhtli (Turquoise [Year] Lord)	Blue Hummingbird
2	Tlaltecuhltli (Earth Lord)	Green Hummingbird
3	Chalchiuhtlicue (Jade Her Skirt)	Hawk
4	Tonatiuh (Sun)	Quail
5	Tlazolteotl (Filth Goddess)	Eagle
6	Mictlantecuhtli (Death Lord)	Screech Owl
7	Centeotl (Maize Cob Lord)	Butterfly
8	Tlaloc (rain god)	Eagle
9	Quetzalcoatl (Feathered Serpent) or Ehecatl (Wind)	Turkey
10	Tezcatlipoca (Smoking Mirror)	Horned Owl
11	Chalmecatli (He of Chalma) or Mictlantecuhtli	Macaw
12	Tlahuizcalpantecuhtli (Dawn Lord)	Quetzal
13	Ilamatecuhtli (Old Lady)	Parrot

posed of twelve birds and a butterfly (Fig. 54, Plate 3). In the Codex Borgia these thirteen Volatiles are explicitly tied to the thirteen day numbers (Fig. 55, Plate 4).

Associated with the twenty day signs, Crocodile through Flower, is yet another series of gods. Numbering twenty and each assigned to a different day sign, they are considered the patrons of the day signs (Table 5).¹⁸ This series appears in the Codex Borgia (Fig. 34) and Vaticanus B but not in the Aztec codices. Sixteenth-century textual sources do not describe it either, perhaps because these textual sources are largely Aztec.

Closely related to the day-sign series is another, very similar, series of twenty gods who are associated with the twenty *trecenas* (Table 6).¹⁹ These gods are presented as patrons or governing forces for the *trecenas*. More is known about them than about the gods in other series, because almanacs that feature the *trecena* patrons appear in almost all the divinatory codices (Figs. 46–50). Moreover, the annotators of the Telleriano-Remensis and Vaticanus A/Ríos described them and their aspects.

These four main series cover sixty-six positions; many of the supernaturals are patrons in multiple series, however, so only some thirty deities are involved here. These are the supernaturals who usually also appear in the other almanacs as well. In addition, Yacatecuhtli (the merchant god), Mixcoatl/Camaxtli (the god of the hunt), and Toci/Cihuacoatl (manifestations of the mother goddess) often figure in the divinatory almanacs. The principal supernaturals who appear and reappear in the divinatory codices are listed and briefly described in Table 2.

The four basic series are at the heart of the divinatory system, for they reappear in most of the extant codices. The Aztec Codex Borbonicus and Tonalamatl Aubin present three of the series (nine Night Lords, thirteen Day Lords, and twenty *trecena* patrons) in their single great composite almanacs, which seem intended to present as much prognosticatory information in one almanac as possible. The Borgia Group codices, in contrast, treat each series apart in a separate almanac, although they occasionally also fold them into other almanacs (e.g., the Night Lords participate in the *trecena* pre-

Table 5. THE TWENTY DAY SIGNS AND THEIR PATRONS

ORDER	DAY SIGN	NAHUATL NAME	SUPERNATURAL PATRON
1	Crocodile	Cipactli	Tonacatecuhtli (Our Flesh [Maize] Lord)
2	Wind	Ehecatl	Quetzalcoatl (Feathered Serpent)
3	House	Calli	Tepeyollotl (Hill Heart)
4	Lizard	Cuetzpallin	Huehuecoyotl (Old Coyote)
5	Serpent	Coatl	Chalchiuhtlicue (Jade Her Skirt)
6	Death	Miquiztli	Tecciztecatl (Conch Shell Lord, moon god)
7	Deer	Mazatl	Tlaloc (rain god)
8	Rabbit	Tochtli	Mayahuel (maguey goddess)
9	Water	Atl	Xiuhtecuhtli (Turquoise [Year] Lord)
10	Dog	Itzcuintli	Mictlantecuhtli (Death Lord)
11	Monkey	Ozomatli	Xochipilli (Flower Prince)
12	Grass	Malinalli	Patecatl (Medicine Lord, a pulque god)
13	Reed	Acatl	Tezcatlipoca-Ixquimilli (Smoking Mirror–Eye Bundle)
14	Jaguar	Ocelotl	Tlazolteotl (Filth Goddess)
15	Eagle	Cuauhtli	Red Tezcatlipoca or Xipe Totec (Flayer God)
16	Vulture	Cozcacuauhtli	Itzpapalotl (Obsidian Butterfly)
17	Movement	Ollin	Xolotl (Monster)
18	Flint	Tecpatl	Chalchiuhtotolin (Jade Turkey)
19	Rain	Quiauitl	Tonatiuh (Sun)
20	Flower	Xochitl	Xochiquetzal (Flower Quetzal)

sensation on Fejérváry-Mayer 1). There is considerable overlap between the series. The nine Lords of the Night also appear among the thirteen Lords of the Day, with the exception of Itztli/Tecpatl and Tepeyollotl (although the latter is an aspect of Tezcatlipoca). Seler (1900–1901:36–37, 1990–1998, 1:43) also pointed out that the patrons of the twenty *trecenas* duplicate almost exactly the patrons of the twenty day signs, and in the same sequence (compare Tables 5 and 6): the first ten patrons are the same in both lists, except that in the *trecena* list Xochipilli is dropped from position eleven,

and the twelfth through twentieth day-sign patrons are slid into positions eleven through nineteen; Xiuhtecuhtli is then added as the final *trecena* patron. That suggests that the list of twenty day-sign patrons predates and formed the basis for the list of *trecena* patrons. This is in accord with our understanding that the twenty-day count predates the *trecenas* of the 260-day cycle.

Five supernaturals—Xiuhtecuhtli, Tlaloc, Chalchiuhtlicue, Tlazolteotl, and Mictlantecuhtli—figure in all four lists. Their realms of responsibility make them naturally important as calendar deities. Xiuhtecuhtli,

Table 6. THE TWENTY *TRECENAS* AND THEIR PATRONS

ORDER	<i>TRECENA</i> DAY SIGN	PATRONS
1	Crocodile	Tonacatecuhtli, sometimes with Tonacacihuatl
2	Jaguar	Quetzalcoatl
3	Deer	Tepeyollotl, with Tlazolteotl or Quetzalcoatl
4	Flower	Huehuecoyotl, with Ixnextli or dancer
5	Reed	Chalchiuhtlicue
6	Death	Tecciztecatl, with Tonatiuh or Tezcatlipoca
7	Rain	Tlaloc, sometimes with Chicomecoatl
8	Grass	Mayahuel, sometimes with Xochipilli or Centeotl
9	Serpent	Xiuhtecuhtli and Tlahuizcalpantecuhtli
10	Flint	Mictlantecuhtli and Tonatiuh
11	Monkey	Patecatl, sometimes with eagle and jaguar
12	Lizard	Itztlacoliuhqui
13	Movement	Tlazolteotl
14	Dog	Xipe Totec
15	House	Itzpapalotl
16	Vulture	Xolotl, sometimes with Tlachitonatiuh
17	Water	Chalchiuhtotolin
18	Wind	Chantico
19	Eagle	Xochiquetzal, with dancer or animal
20	Rabbit	Xiuhtecuhtli and Xipe/Itztapaltotec (Obsidian Lord)

god of fire, time, and the calendar, is at the very heart of the divinatory apparatus (he is pictured as such in the cosmogram on Fejérváry-Mayer 1; Fig. 65, Plate 6). Tlazolteotl, goddess of childbirth and absorber of filth, controls and is invoked at the beginning of life and again toward the end when people confess their misdeeds to her; both occasions call for divination. Mictlantecuhtli, the Death Lord, brings life to an end and receives humans in Mictlan when it is over. The water gods Tlaloc (the rain god) and Chalchiuhtlicue (goddess of groundwater) are the supernaturals most likely

to be invoked on a daily basis by peoples who depend on agriculture for sustenance. These five gods are at the core of Aztec daily life.

When deities serve as lords or patrons of the major calendrical cycles, and in many other almanacs as well, they usually appear as static entities. Although water may flow from beneath the water deities (Fig. 17) and fire from Xiuhtecuhtli, the gods themselves, with some exceptions, are not actually doing anything: they do not draw blood, work things, or otherwise engage with their surroundings. Instead they merely preside. Gen-

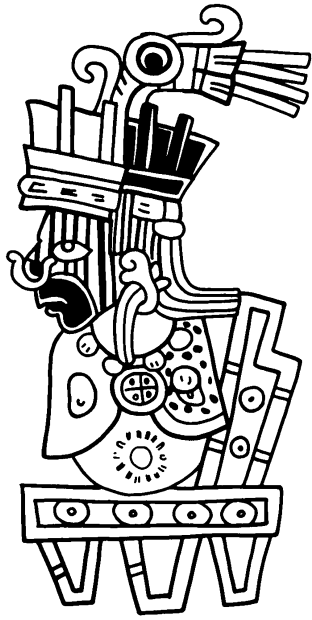


Fig. 18. Patron deity Tlazolteotl presented as a cult bundle. Drawing by Heather Hurst. *Source:* Vaticanus B 61.

erally they are posed in profile, with their legs bent at the knee, one leg in front with the foot below and one leg down and the foot behind, as in a pinwheel stance or what Quiñones Keber (1993:175) has called a “genu-flecting” pose (Fig. 17, Tonatiuh). Usually their arms are outstretched in front, with their hands either holding something or open with fingers spread (Fig. 17, Quetzalcoatl). This is the pose of almost all the *trecenas* patrons in the Aztec *tonalamatls* (Figs. 33, 46, 48, Plate 1), and it may well symbolize something like divine or supernatural authority. In several manuscripts (e.g., Borgia) this characteristic pose is modified by having the supernaturals sit on thrones, with one leg in front of the other (Fig. 17, Tlaloc, Chalchiuhtlicue, Quetzalcoatl). Occasionally the supernaturals preside over their *trecenas* or day signs as enthroned cult bundles: armless and legless, with their torso wrapped as a bundle (Fig. 18). Such is the case of the patrons of *trecenas* eleven through fourteen and sixteen in the Vaticanus B (59–62, 64), whose counterparts in other manuscripts are full figure.

In almanacs other than the basic lists, the deities are often more active. They walk a road, make offerings, drink blood, manipulate small human figures, or otherwise participate as actors. In these cases they are components of scenes where meaning is carried by the supernaturals *and* by their actions and interactions with others.

Humans

Along with the supernaturals, human figures actively participate in the creation of divinatory meaning. Either they are the focus of supernatural attention and manipulation, and thereby help create a scene of action, or they have autonomous roles as actors who contribute their own information by virtue of their deeds and attitudes. Never are they named or otherwise identified as specific persons. They function as anonymous actors who represent either categories of people or actions. When these humans are nude or very simply dressed, their message is clearly carried by their poses, gestures, and actions, which represent an idea or state of being. Such are the various diuretic figures in the Borgia (12–13, 26) and Vaticanus B (87–94), for example, or the decapitated figures in the Borbonicus (19) (Fig. 19).

Fig. 19. Messages carried by the poses and actions of human figures: **a**, diuretic human vomiting blood and expelling clouds of night; **b**, decapitated human. Drawings by Heather Hurst. *Sources:* **a**, Borgia 26; **b**, Borbonicus 19.

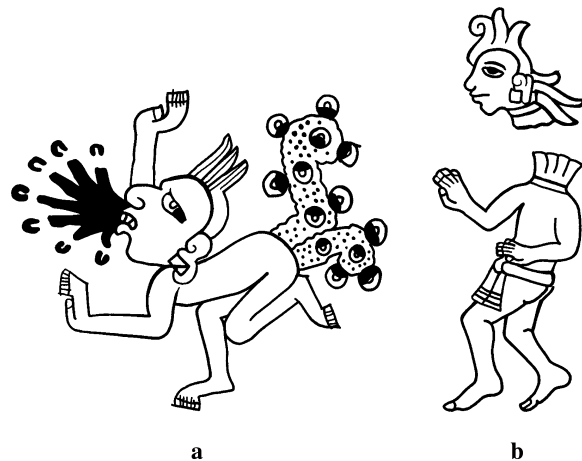




Fig. 20. Human occupations and states of being: a, priest; b, sacrificial victim; c, wanton woman; d, old man; e, mature woman (here with the headdress of Tlazolteotl); f, dead man. Drawings by Heather Hurst. Sources: **abcd**f, Borgia 67, 19, 64, 60, 66; e, Fejérváry-Mayer 17.

In other cases, the humans' costuming and body paint identify them as particular kinds of people: priests, sacrificial victims, or lustful and improper men and women, for example (Fig. 20abc). Priests are red around the ears from bloodletting, often have long hair, and carry the fringed white incense pouch and bloodletting instrument of their occupation. The victims appear either simply in sacrificial death or in full elabora-

tion with red and white striped body paint and black paint around the eyes and accoutered with sacrificial banners, cords, and balls of eagle down, and with their chests open and bloody, the knife still present (Borgia 19). The wanton men and women sport long tousled hair and assume angular poses. In the marriage almanacs, the costuming and attitudes of the figures are even more detailed and thus go even further in signaling the characters of husband and wife and the quality of the marriage union.

Poses, Gestures, and States of Being

For both humans and supernaturals, poses and gestures are supremely important. The positioning of the arms and legs and the gesturing of the hands all carry meanings beyond the mere action of holding something or performing a task. A dozen or more distinct poses can be separated out of the great variation in figural positioning, but, unfortunately, we do not know what most of these poses mean. Most gestural studies pertain to the Maya, and we must acknowledge that a pose in one area may not carry the same meaning in another.²⁰ The problem for the divinatory manuscripts is both a lack of study and our insecure understanding of the specific mantic content of the almanacs. Many gestures probably signal interactions (such as requesting and granting) that could go either way. Others signify states of being.

A few can tentatively be read (Fig. 21). The open-armed pinwheel pose that is characteristic of the *trecena* patrons in Aztec *tonalamatls*, and is found in other almanacs as well, seems to be a convention for supernatural authority, although it may additionally carry finer or more distinctive meanings. A particular angular pose—with legs bent, body leaning slightly forward, arms akimbo, and head twisted sharply to look back over the shoulder—marks lustful or sexually errant individuals (Klein 2001:208–209); it distinguishes females with long tousled hair, some clearly lustful men, and dancers.²¹ The possibly related gesture of an individual placing the palm of an open hand at his or her eye may be a signal for wealth or prosperity, for it tends to be used by heavily jeweled persons.²² Adam Sellen (1998) has securely identified as a sign of death the

headlong plunge downward into the open mouth of the earth monster, particularly when the person falling has closed eyes. One of the most common activities is speech or singing, which is signaled by a speech scroll in front of the noisemaker's mouth. Elaborately sacred speech is signaled by flowers attached to the scrolls (Fig. 46, Plate 1); impure or adulterous speech may be described by scrolls that are yellow, the color of excrement (Laud 34).

Most of the supernaturals and humans in the divinatory codices exist in a state of perpetual adulthood. Infants and children are not distinguished in any way except in the birth and marriage almanacs, where they are diminutive but proportionally adult males; none are sexed female. Old age is a visually marked category, however. Old people usually have a single snaggletooth and withered lower jaw; sometimes they have stringy gray hair and wrinkles, and the males have gray beards (Fig. 20d). Mature, but not necessarily old, women

who have borne children have wrinkled stomachs (Fig. 20e). Death is signaled by a closed eye (Fig. 20f).

Emotional indifference is a rule. The actors in the codices do not grimace or grin, cry out in anguish or rejoice. Couples in coitus under marriage blankets do not smile, and sacrificial victims show no pain.²³ Canonically supernaturals as well as humans have their mouths slightly open to reveal their upper teeth, but this should not be read as a snarl. Likewise, downturned lips, which are the rule, are not frowning.

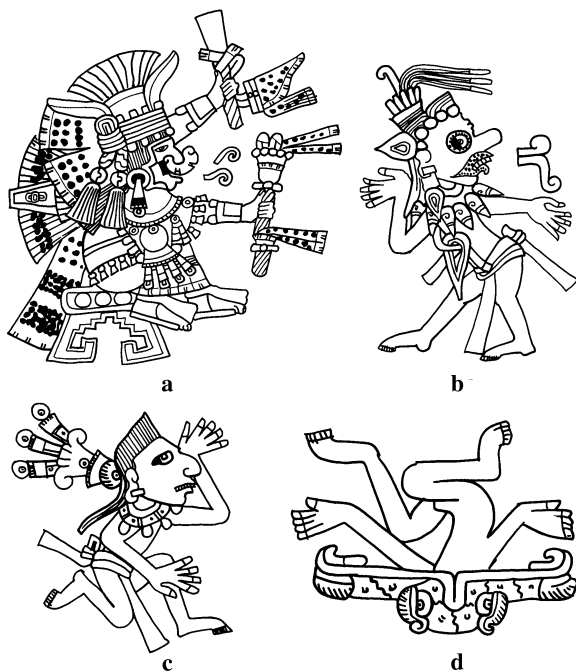
Animals

Although supernaturals and humans create and carry most of the prognosticatory meaning in the divinatory almanacs, animals of many kinds appear, usually in secondary contexts. Those found most frequently are the jaguar, eagle, rattlesnake, coral snake, and quetzal.

Some animals, especially those that are elaborately costumed, are better identified not as animals per se but as zoomorphic supernaturals. Such are Chalchiuhtotl (the Jade Turkey), Huehuecoyotl (Old Coyote), Itzpapalotl (Obsidian Butterfly), Tepeyollotl (Hill Heart, the jaguar manifestation of Tezcatlipoca), and Xolotl (Dog/Monster), described in Table 2. They take their most anthropomorphic form when they serve as patrons of the *trecenas*, where they are dressed in deity garb and effect the pose of the other supernatural *trecena* patrons (Figs. 46–50); Huehuecoyotl, Tepeyollotl, and Xolotl wear loincloths. When they serve as day-sign patrons, however, these same creatures take their most zoomorphic form and are fully manifest as turkey, coyote, butterfly, jaguar, and dog (e.g., Fig. 58). Regardless of their form, all are conceptualized as deities rather than animals.

Most animals are readily identified. Of the birds (Figs. 22, 55, Plate 4), eagles are characterized by curved raptorial beaks and spiked feathers that are either black or black-tipped; often the feathers are embellished with flint knives to describe a flinted eagle. Vultures have longer beaks and prominent round eyes. Quetzals stand out from the parrots and macaws by the crests on their heads. Hummingbirds have long bodies and long straight beaks; when found in mantic scenes, they usually drink nectar from flowers. In contrast, quails have compact bodies, rounded heads, and black and white

Fig. 21. Poses and gestures: a, open-armed pinwheel stance of *trecena* patrons; b, angular backward-looking pose of lustful individuals; c, palm-at-the-eye gesture; d, downward plunge. Drawings by Heather Hurst. Sources: a, Borbonicus 5; bcd, Borgia 64, 62, 60.



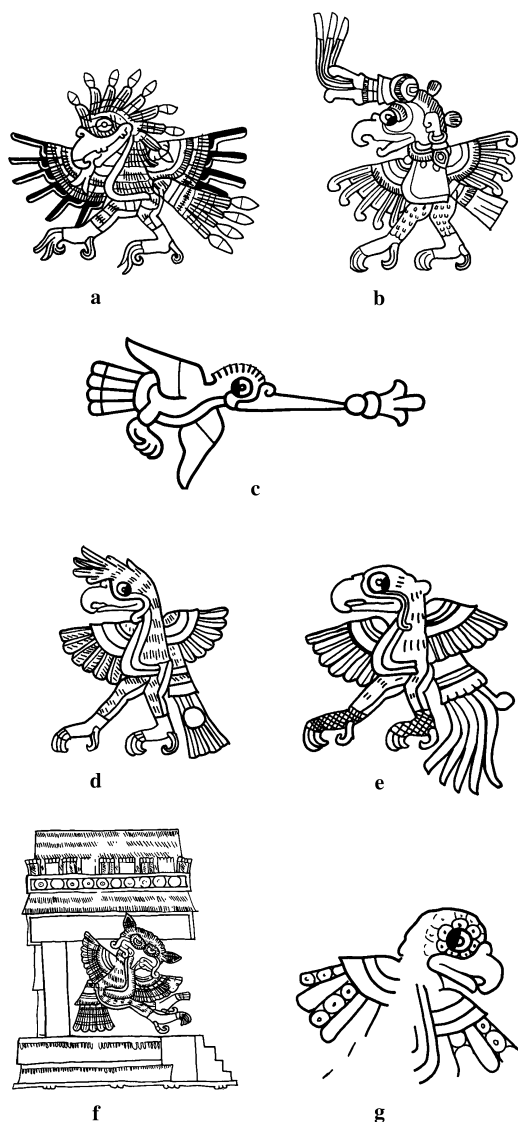


Fig. 22. Birds: a, eagle; b, vulture; c, hummingbird; d, quetzal; e, macaw; f, owl in temple; g, quail. Drawings by Heather Hurst. Sources: *abdefg*, Borgia 5, 68, 71, 71, 78, 71; c, Laud 31.

spotted feathers; they almost always figure as offerings. Owls canonically are rendered with frontal faces, in contrast to the profile views of all other birds; they usually appear inside dark temples.

Of the land and water predators, the jaguar is known by his spots, and the crocodile by his spiny hide, long curved snout, and prominent teeth (Fig. 23ab). Several kinds of serpents appear with and without rattles, including generic snakes, several kinds of rattlesnakes, and most frequently a red-banded coral snake (Fig. 23cde).²⁴ The coral snake is often found with female supernaturals in the divinatory codices and in Mexica stone sculpture (on the Coyolxauhqui relief, for example, coral snakes are tied around the legs, arms, and waist of the goddess), but it also appears frequently in other contexts in the divinatory codices (e.g., as an offering before Tezcatlipoca). Seler (1900–1901: 40ff.) originally called it a “red fire snake” but revised its identification to a “red blood serpent” (Seler 1963, 3: 29), and Joseph John Granata (1980: 330–336) has pointed out its connections with blood rituals, earthly fertility, and death. Jansen (1986:104) has suggested it symbolizes the negative aspects of sexuality, such as adultery, because it appears to be an attribute of Tlazolteotl; elsewhere Anders and Jansen (1993: 126) read it as vice and danger. The full range of its associative and metaphoric meanings is not well understood, however.

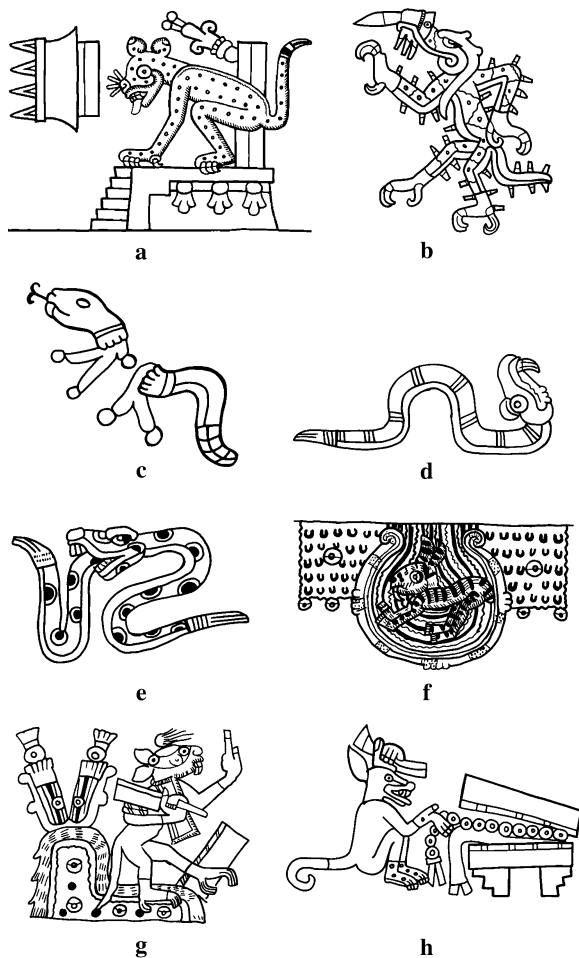
Deer and several kinds of small mammals are distinguished (Fig. 23fgh): rabbits by their long ears; possums by a black outline around the eye, which extends in a long point to the nose; and raccoons by a black rectangular slash across the eye area. Small water creatures like fish, turtles, snails, and other mollusks characterize bodies of water. Arthropods include scorpions, spiders, and grasshoppers. Grasshoppers, along with mice and worms, only appear when they damage the maize crop. The animals found most frequently in the divinatory almanacs are the jaguar, eagle, rattlesnake, coral snake, and quetzal.

As one would expect, those creatures that are culturally important—the jaguar, the serpent, and several kinds of birds (e.g., eagle, owl, quetzal)—more frequently play major roles in the almanacs than do other animals. They either take the place of supernaturals or humans in action scenes or participate as secondary actors. At the other end of the spectrum, most aquatic

animals like fish and mollusks function only to qualify or embellish their watery setting. Some animals (e.g., deer, rabbits, quail, and serpents) are more likely to figure as prey or offerings; when deer appear, for example, they are always being speared or already dead. Still other animals usually function as symbols (e.g., owl, scorpion, double-headed serpent).

On a very few occasions animals carry the full weight

Fig. 23. Ground animals common in the codices: **a**, jaguar; **b**, crocodile; **c**, rattlesnake (here cut in half); **d**, red-banded coral snake; **e**, rattlesnake with circular black markings; **f**, rabbit in the moon; **g**, raccoon (here with sacrificial banners); **h**, possum (here opening of box of jewels). Drawings by Heather Hurst. Sources: **a**, Laud 3; **bd**fg, Borgia 51, 61, 71, 13; **c**, Borbonicus 4; **eh**, Vaticanus B 45, 86.



of the prognostication. The thirteen Volatiles or flying creatures govern the thirteen day numbers, for example. Elsewhere, a jaguar crouching on the platform of a ruined, flowered temple conveys the augury for the day sign Motion (Fig. 23a). Jaguars, except the supernatural Tepeyollotl, usually are being sacrificed or mortally wounded. Jaguars and eagles can carry the banners of sacrifice to represent soon-to-be-killed warriors (Fig. 33), or blood can already be flowing from their open chests. Thus, a flinted jaguar with his chest cut open is the augury for the day sign Death in Borgia 24. In another almanac, the prognosticatory message may feature an owl peering out from the dark interior of a temple (Fig. 22f).

One distinctive almanac that reappears in three codices features four scenes of animals as attackers or combatants (Borgia 49–52, Fejérváry Mayer 41–42, Vaticanus B 24–27; Figs. 32, 74, Plate 7). The four-cell almanac sequentially pictures a bat holding severed heads or attacking a human, a jaguar menacing a human while being stabbed by the hunting god Mixcoatl, a crocodile biting off the foot and lower leg of a supernatural (either the sun god Tonatiuh or Tezcatlipoca), and a serpent and eagle doing battle over a rabbit (Fig. 32). Although we do not know the full stories behind the scenes, these are clearly mythic events of considerable importance.

The bodies of a few animals form the physical basis for diagrammatic arrangements of the day signs. In the “deerskin almanacs” that appear in the Borgia (53), Vaticanus B (96), and Tudela (125r), the skin of a deer is stretched out frontally, and the twenty day signs are arranged around the skin (Figs. 44, 59, 60, Plate 5). Similarly, in the Vaticanus B (85–86) a striding dog and a striding monkey become armatures for the twenty day signs, ten signs on each animal; elsewhere the bodies of four scorpions display the day signs, with five signs per scorpion (Fig. 64). Another almanac features four serpents that both subdivide the cell and provide a ground for spacers (Borgia 72, Vaticanus B 93; Fig. 63).

Usually when animals appear, however, it is in a secondary context with supernaturals or humans, who carry most of the meaning. In these instances, they offer amplifying information by their activities, gestures, and mere presence. A monkey stands animatedly next to the solar god, for example, or a raccoon cos-

tuned for sacrifice poses with the pulque god Patecatl (Fig. 23g).

Some animals contribute meaning as symbols rather than as actors, for their mere appearance conveys considerable symbolic power. The scorpion, for example, never participates actively in any event; instead, its presence is functionally symbolic. It brings qualities of sharpness, stinging, and thus pain to an augury, and it appears in contexts appropriate to this: between fighting spouses in the marriage almanac (Borgia 59, Laud 38, Vaticanus B 37) or in a rush of black water shot through by arrows (Borgia 69, Vaticanus B 57). The rabbit traditionally appears within the curved basin of the moon and characterizes that celestial body (Fig. 23f). In an almanac that Seler (1963, 1:223) interpreted as linking the *trecenas* to different regions of the cosmos, a jeweled white deer which lies dead is said to represent east; and a speared brown deer, north (Fig. 70 right). Birds, when they sit on the top of cosmic trees, function symbolically to characterize the cosmic directions, as do the trees themselves. Coral snakes carry symbolic and metaphoric meaning seemingly associated with blood sacrifice (Granata 1980: 330–336), and butterflies symbolize fire and the souls of warriors who died in battle or on the sacrificial stone (Beyer 1965a). Double-headed serpents also appear occasionally as symbolic elements, but their meaning is not known.

Although there is no complete and comprehensive study of the animals in the divinatory codices, Eduard Seler's (1990–1998, 5:167–340) major essay on the animals in the Mexican and Maya codices is extremely valuable for locating different species and comparing the species and types visually (he also draws on valuable linguistic evidence); however, his iconographic readings are not always well supported or reliable. Elizabeth Benson (1997) has contributed a good overview of animal imagery throughout Prehispanic Latin America; and Carmen Aguilera (1985), Jeanette Peterson (1990), and Yolotl González Torres (2001) survey both the fauna and flora.

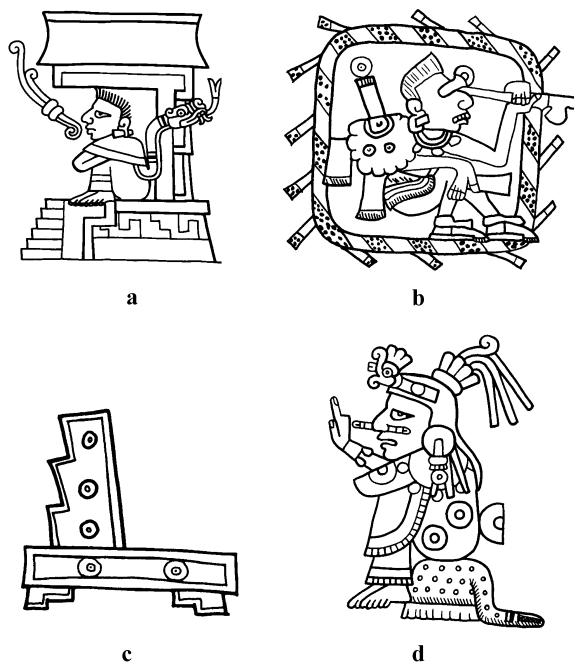
The protagonists in the divinatory almanacs—the supernatural, human, and animal actors—provide meaning both by their very presence and by the actions they perform. Their physical form and costuming identify what kind of beings they are, and their poses and gestures indicate the action. This action can also

be qualified and further specified by scenic elements and by the accoutrements and artifacts that the actors manipulate.

Scenes

Most of the imagery in the almanacs exists within undifferentiated blank space that is defined by the borders of the rectangular boxes, which I call cells, that compose the almanacs. In this space, supernaturals, humans, and animals usually stand, pose, or move on unspecified ground lines. They are placed and sized to fill the area in the cell. The space itself is unmarked: it is default space, and we read it as being within this world, on dry land, and during the daylight hours. When the prognostication calls for a specific location, architectural and landscape elements are added to qualify the space and characterize the location. In this way, the painters signal bodies of water, ritual precincts, hills,

Fig. 24. Elements of the built environment: a, temple; b, enclosure of fasting cords (here enclosing a priest piercing his eye); c, royal throne; d, jaguar skin ottoman. Drawings by Heather Hurst. Sources: a, Laud 39; bc, Borgia 10, 23; d, Fejérváry-Mayer 23.



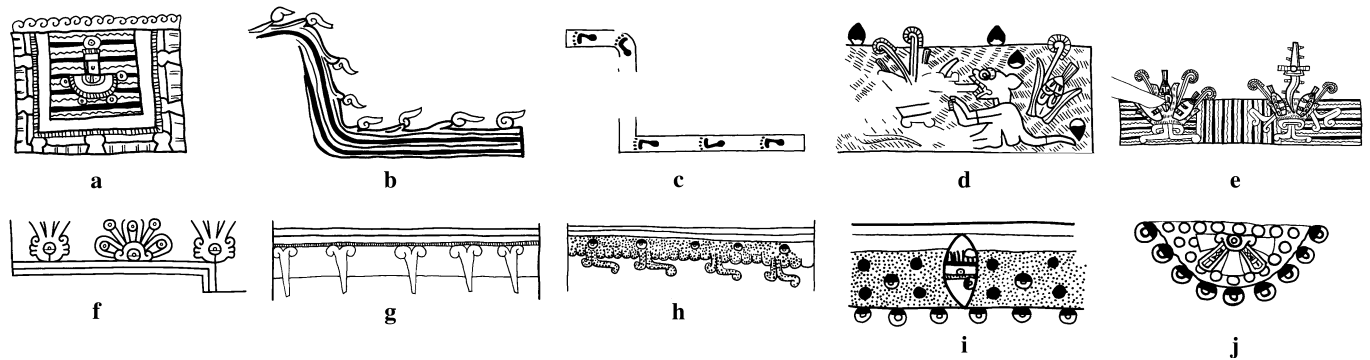


Fig. 25. Landscape features: a, canal or river; b, flowing river of “black water”; c, road; d, dry field; e, chinampas; f, sky band; g, sunny sky; h, cloudy sky; i, night sky; j, night sky or night time. Drawings by Heather Hurst. Sources: **abdeghi**, Borgia 14, 54, 27, 20, 27, 27, 50; c, Fejérváry-Mayer 35; f, Laud 17; j, Borbonicus 12.

fields, chinampas, and roads, as well as the heavens, the dark night sky, and darkness and night in general.

Architectural features locate the gods or action in the built environment of a polity (Fig. 24ab). The most common architectural feature is the temple, sometimes presented frontally but generally depicted in profile in what Donald Robertson (1959:19) called the “T elevation,” on a small stepped platform; such temples canonically have red posts and lintels and thatched roofs. Their roofs can be decorated with qualifying elements such as jades or other symbols of preciousness, instruments of war and bloodletting, and hearts and bones associated with the death lords (Fig. 42, Plate 2). “T”-shaped ball courts locate the action in or near these structures on occasion, and small circular enclosures composed of “fasting cords” can sequester a penitent within (Fig. 24b).²⁵ Often deities sit on thrones, which are almost always red and have high backs, or on backless ottomans; both usually have seats covered in jaguar skin (Fig. 24cd). These thrones and ottomans probably function more to qualify the individuals on them, however, than to signal an interior setting. In fact, interiors are rarely presented.

The most common marked space is a body of water, either a flowing river or stream or a canal (Fig. 25ab). In all cases, the water is blue or blue-gray and has black wavy lines running through it and a curled white froth on the surface. Rivers and streams can flow in one direction, with watery fingers that stretch out toward the flow; rivers, canals, and basins can also be enclosed by

a border on three sides. These bodies of water are often embellished with fish or other water creatures; unclean “black water” is marked by little gold curls of excrement (Fig. 25b).

Occasionally the action takes place on a road or in the fields (Fig. 25cde). Roads, well-traveled by merchants, are represented as tan or brown bands along the ground line, usually embellished with black footprints. Generalized fields are wider bands of tan, patterned throughout by parallel hatches. The specialized raised fields called chinampas combine rectangles of wavy dark water and wavy tan earth. Hills are bell-shaped mounds of earth, which often have dark interiors that may indicate the caves within.

Sky bands figure in a few almanacs (Fig. 25fghij). A generic sky band, characterized by the “great star” or “Venus” motif and pendant “night eyes” or stars, opens a long procession of humans and supernaturals moving toward a cave in the Codex Laud (17–22) (Figs. 25f, 100). Otherwise, day-time sky bands are filled either with scrolled clouds to signal rain or with a row of sun rays to signal sunshine, when they appear with rain gods. Night skies are a dark gray field patterned with black disks, tiny black spots, and the “night eyes” or stars (Fig. 25ij).²⁶ This same gray patterned field likewise represents night or simply darkness.

Scenic elements are sparsely used in the almanacs, and they are never only decoration or embellishment. When they appear, it is because the augury requires a specific kind of location.

Accoutrements and Instruments

A whole class of objects consists of things that are held, offered, or otherwise manipulated by the actors. They include ritual instruments, such as those used in blood-letting and blood sacrifice, vessels for offerings, the offerings themselves, musical instruments, and the panoply of objects that may be used in rituals. Most are artifacts, but some are raw materials. Weapons and the tools of various trades and livelihoods also figure in the almanacs. These implements contribute meaning in two ways. First, they qualify the existing action and make it action of a certain kind: for example, the act of Xiuhtecuhtli offering rubber and resinous wood (Fig. 17). Second, they also signify action or mantic qualities by their mere presence: the presence of rubber and pitch signifies that it is offered (Fejérváry-Mayer 3; Fig. 53). Many of these accoutrements and instruments are readily identifiable (an axe looks like an axe), but others (such as an incense pouch) are more specialized and should be explained.

As one might expect in divinatory almanacs, the most common accoutrements are those related to rituals.²⁷ Within this general category, the tools of blood sacrifice are prominent (Fig. 26). Heart sacrifice is almost always accomplished with a (flint) stone knife, which is canonically rendered as a white lancet pointed on both ends with one or both tips colored blood red. Although beings can be pierced by an arrow or spear, it is this knife that always effects heart extraction. Sacrificial victims are often bound by a white cord, which can be studded with balls of eagle down, and they usually carry white banners and are chalked white. These accoutrements—the cord, down balls, banner, and white chalk—come to signal death by sacrifice when they appear. Extracted hearts are placed in a bowl called *cuauhxicalli* (literally “eagle vessel”), whose rims are pictorially lined with eagle feathers (Fig. 26d) (Seler 1990–1998, 3:79–86; Nicholson and Quiñones Keber 1983:36–37).

Personal bloodletting has its own specialized tools, specifically the pointed bone awl (which is always colored red on the wider joint end) and the maguey spine (which can be colored red on the pointed tip) (Fig. 26ef).²⁸ The bone awl and maguey spine are often car-

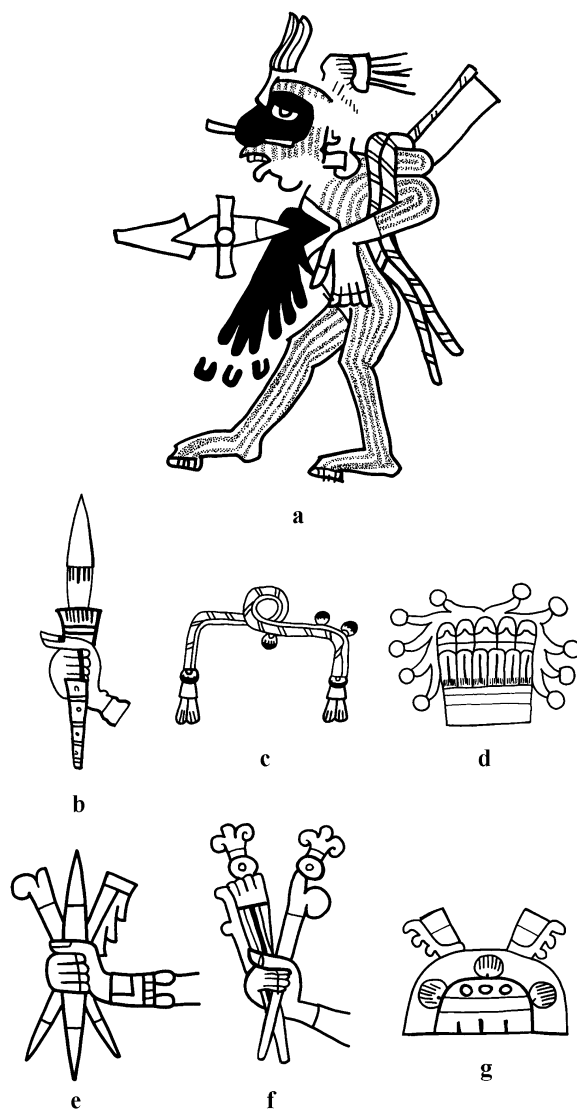


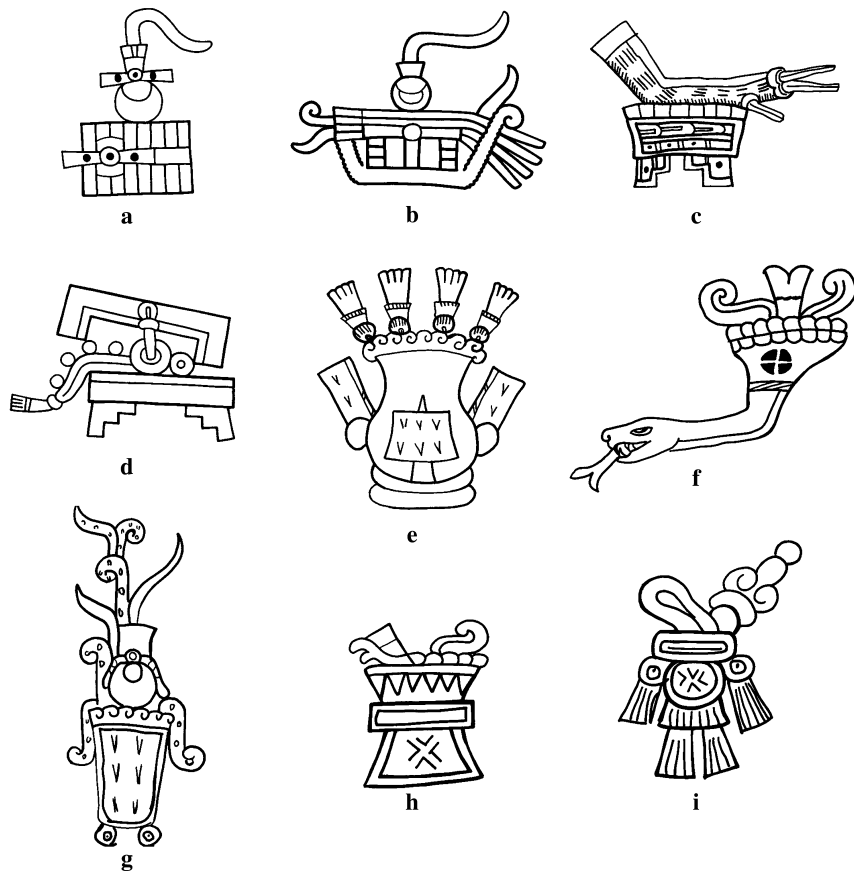
Fig. 26. Implements for blood sacrifice: **a**, sacrificed male (here covered with chalk, bound with cords, and identified by a sacrificial banner); **b**, sacrificial knife; **c**, white cord studded with balls of eagle down; **d**, *cuauhxicalli* (eagle vessel) for human hearts; **e**, cluster of bone awl, stone knife, and maguey spine; **f**, maguey spine and bone awl embellished with flowers; **g**, grass ball (*zacatapayolli*) into which maguey spines are stuck. Drawings by Heather Hurst. Sources: **abf**, Borgia 19, 61, 22; **c**, Cospi 6; **dg**, Borbonicus 24, 6; **e**, Laud 41.

ried in the hand or tucked into a headdress as a pair, sometimes also accompanied by a knife or spear. They can be embellished with stylized flowers to signal the precious quality of the liquid they draw. The Aztec almanacs, but not the Borgia Group ones, also picture the plaited grass balls into which the Aztecs thrust their bloodied maguëy spines (Fig. 26g); such balls, called *zacatapayolli*, additionally figure in monumental stone sculpture (Seler 1990–1998, 3:89–90; Nicholson and Quiñones Keber 1983:39).

Blood was only one offering, however. The Borgia Group almanacs frequently picture individuals offering up black balls of rubber and small tied bundles

of resinous sticks (Fig. 27).²⁹ The rubber balls are almost always embellished with a paper tie and a long feather plume. The rubber balls and resinous sticks are commonly offered and burned together. Other offerings include copal and pulque, long green strips that might be either quetzal feathers or special grasses or reeds, and animals such as deer, rabbits, serpents, quail, and butterflies. They are offered up in shallow wide-rimmed bowls, which may be variously decorated and footed or not. Occasionally lidded boxes are overturned or shown with their lids ajar to reveal the jeweled strings inside (Figs. 23h, 27d).³⁰ Pulque, the fermented milk of the maguëy plant, conventionally is

Fig. 27. Offerings: a, ball of rubber and tied bundle of sticks; b, rubber, sticks, and long green grasses or feathers; c, deer leg in footed bowl; d, lidded box with jewels inside; e, olla of pulque (the froth embellished with flowers); f, long-handled incense pan; g, tall brazier of burning copal (here with rubber ball); h, brazier of burning copal (here with maguëy spine); i, incense pouch. Drawings by Heather Hurst. Sources: ad, Fejérváry-Mayer 11, 12; b, Laud 41; ceg, Borgia 65, 69, 23; fhi, Borbonicus 13, 6, 4.



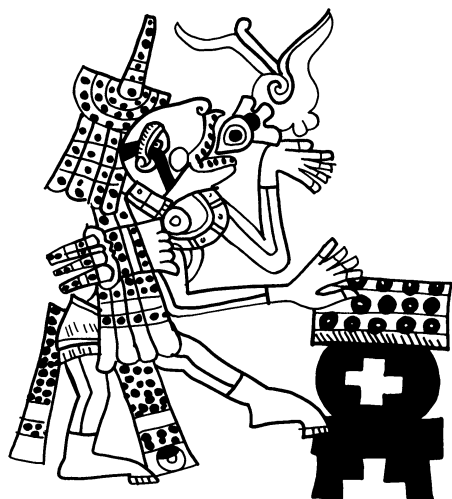


Fig. 28. Zoomorphic figure (monkey) beating the kettle drum (*huehuetl*) and blowing the conch-shell trumpet. Drawing by Heather Hurst. *Source*: Borgia 24.

contained in large round jars or ollas with high necks; the pulque is rendered as a curled foaming cap, patterned either with small U-shaped marks or with dots. Copal and other hardened resinous saps are burned in long-handled incense pans or in tall cylindrical censers, where the smoldering incense is represented by white curly waves (Borgia 18, 63) or golden balls (Borbonicus 11). Incense is transported in white fringed and tasseled purses, which are commonly carried along with bloodletters by religious officials (Figs. 20a, 271). Indeed, these incense bags are priestly signifiers. Another priestly container is the tobacco gourd, a yellowish bumpy gourd usually worn strapped to the back by Cipactonal and Oxomoco and occasionally by other priests (Figs. 20d, 24b). It holds powdered tobacco used for offerings.

Occasionally the mantic content of the almanacs calls for music. Then the lords of music and dance beat the tall kettle drum, called the *huehuetl* in Nahuatl and considered to have a supernatural essence, and blow the conch-shell trumpet (Fig. 28). They also beat turtle shells with deer's antlers and shake gourd rattles.³¹

Beyond the implements that relate to rituals, the next most common artifact group is weapons (Fig. 29). Spears, arrows, and darts (which are functionally the same in the almanacs) have tan shafts, white stone blades stained red at the tips, and hafts bound with

eagle feathers and occasionally balls of down (Fig. 29b). By implication the shafts are reed, because the day sign Reed in the Borgia Group codices is signaled by an arrow or spear. These spears are generally held in groups of three or four. The bearer usually also holds a spearthrower (*atlatl*), fashioned as an arm-length wand that has circular white (shell) finger holds and a hooked end to launch the spears; these spearthrowers may be embellished with eagle feathers and down balls (Fig. 29ac). A circular shield complements and usually accompanies the spear and spearthrower (Fig. 29c). The other major weapon is the obsidian-edged club, which may be straight or slightly curved. The shield, spears, spearthrower, and club form a powerful symbol of war when they are grouped as a single motif (Fig. 29d).

Implements associated with other occupations and tasks are less common in the almanacs (Fig. 30). Supernaturals occasionally use an axe to cut trees and a broad-bladed digging stick to till the soil. When the rain gods carry the axe it probably refers either to lightning or to sharp-cutting rains (e.g., Vaticanus B 43–48). Merchants often rely on a walking stick, which can be straight or curved over at the top, and they carry their burdens on the back in a distinctive carrying frame (Fig. 30c). A small curved wooden stick carved with a deer head on top is the baton of some priests or shamans (Figs. 20d, 30d). Women's tools are the *mano* and *metate* used for grinding corn and the accoutrements of the weaver's basket, especially the weaving batten and spindle (Fig. 30e). Such weaving instruments are usually associated with Tlazolteotl, patroness of weavers.

These accoutrements and instruments combine with the postures and gestures of the supernatural, human, and animal agents to create specific kinds of actions. In a marriage almanac, a man who holds an axe aloft while facing his wife thereby becomes a menacing figure (Borgia 59). Deities who hold a spearthrower, spears, and a shield become not just Tlaloc and Mixcoatl but aggressively threatening aspects of these gods (Fig. 29c). A monkey becomes an agent of music by virtue of the conch-shell trumpet and *huehuetl* that he plays (Fig. 28), just as a human is identified as a priest by the bloodletting instruments and incense pouch that he carries (Fig. 20a). The accoutrements contribute rich specificity to the action being depicted in the almanacs.

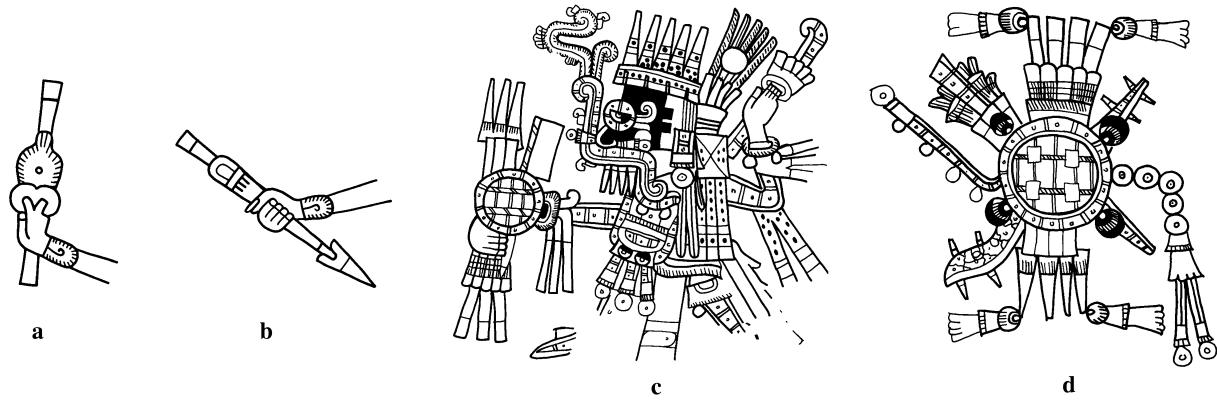


Fig. 29. Weapons: **a**, spearthrower; **b**, spear or arrow; **c**, Tlaloc holding in front a group of three spears, round shield, and white banner, and aloft in back a spearthrower; **d**, combination of spears, spearthrower, obsidian-edged club, string of jewels, and round shield symbolizing war or conflict. Drawings by Heather Hurst. *Sources*: **ab**, Laud 19; **cd**, Borgia 25, 70.

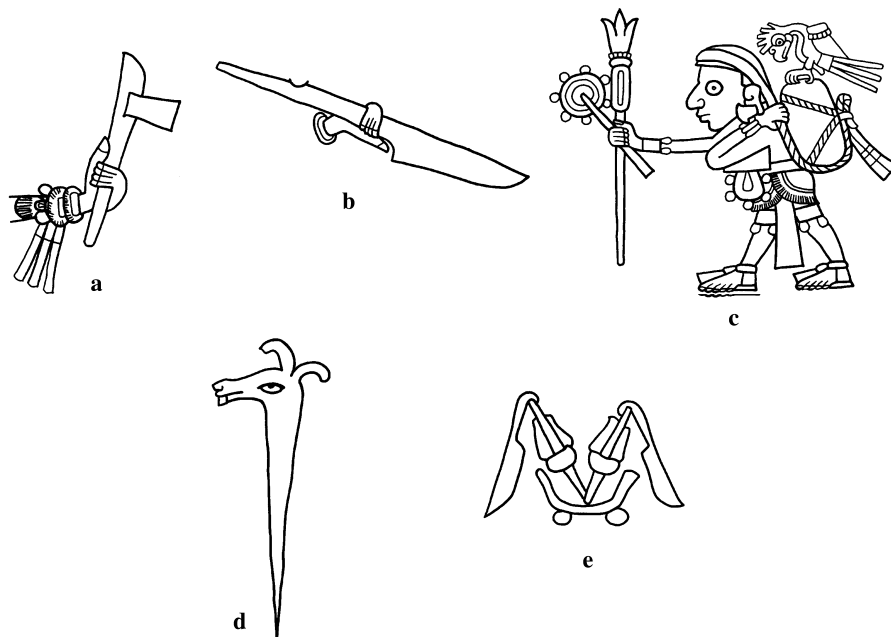


Fig. 30. Implements for work: **a**, axe; **b**, digging stick; **c**, merchant holding staff and fan with a carrying frame supported on his back by a tumpline; **d**, deer stick; **e**, spindles and spinning bowl. Drawings by Heather Hurst. *Sources*: **abe**, Borgia 19, 20, 59; **c**, Fejérváry-Mayer 31; **d**, Borbonicus 21.

Symbols

Figural elements of the final group contribute meaning not as part of scenes or actions but as independent signifiers. They would fall within the Peircean classes of indexes and symbols, for they signify by metonymy, synecdoche, and instrumentality. Being figural representations of things and phenomena, they stand metaphorically for the concepts and qualities culturally associated with these signifiers. Symbols usually stand cognitively, if not visually, apart from the other elements in the mantic field and convey autonomous meaning.

Some of the most common symbols convey messages of danger, destruction, or conflict. Two roads that cross at a 90-degree angle forming an “X” represent the crossroads (Fig. 31ab). When it appears in the almanacs, it clearly signals danger, for the Aztecs considered crossroads to be dangerous places, where the Cihuateteo (souls of women who died in childbirth) would descend to harm travelers and especially children (Sahagún 1953–1982, bk. 4:41).³² Implements associated with blood sacrifice and warfare, in addition to being part of costuming, can also appear as independent elements or be attached to landscape or scenic features (Figs. 26cdg, 29d). When this occurs, they function symbolically to communicate qualities associated with these realms. Warfare and, by extension, conflict or destruction are conveyed by the combination of a round shield and a group of spears, a common pairing that may be embellished with other weapons (Fig. 29d).

The sun disk and the night sky also can function as symbols separate from their roles as scenic indicators (Fig. 31cdef). In these instances, they are configured as independent elements: the sun disk signifies the daylight hours and perhaps lightness in general, and the moon in a semicircle of night sky symbolizes generalized night or darkness. In other instances, the sun, moon, and a configuration of half-sun, half-moon communicate on more conceptual levels; in the marriage almanacs, where these symbols appear in most of the mantic cells, they seem to signify a couple’s positive, negative, or variable/mixed prospect for having children (Boone n.d.b).³³

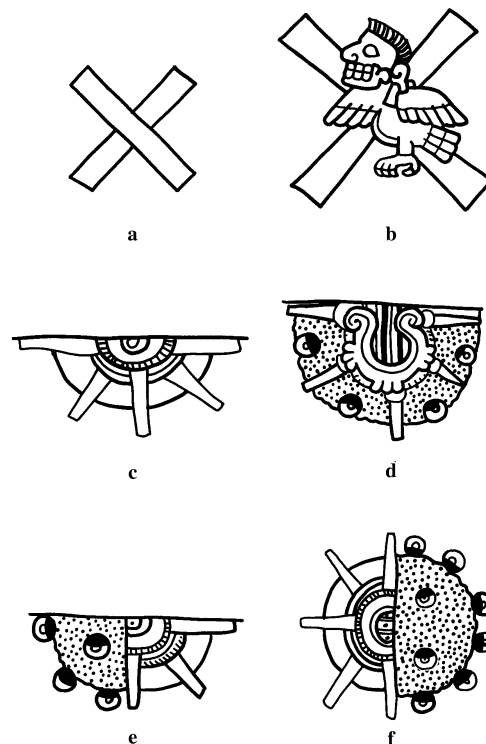


Fig. 31. Symbols: a, crossroads; b, crossroads with a horned owl (*tecolotl*, often with a skeletal human head), a symbol of death; c, sunlight or day; d, night sky or night; e, night-day combination; f, day-night combination. Drawings by Heather Hurst. Sources: ab, Fejérváry-Mayer 30, 3; cdef, Borgia 59, 59, 59, 80.

In the early colonial period, the Spanish friars equated lightness and the sun with Christ and spiritual enlightenment, developing a solar Christ metaphor that continues today among some indigenous populations (Burkhart 1988). Equally, they linked darkness with evil and sin. Sahagún’s (1953–1982, bk. 6:198) Nahuatl text speaks of a broken sun, which his Spanish text explains is “half good, half bad,” but Burkhart (1988) points out that Sahagún was a chief proponent of the solar Christ metaphor. Although the good/salvation versus evil/sin antithesis is firmly a Christian construct (Burkhart 1989:28–39)—and we must be careful not simply to apply it back to the central Mexicans—the Precolumbian meaning may nevertheless have been generally similar. The original indigenous pairing more probably relates to the antithetical pairing

of order (the sun and daylight hours) and chaos (night), which was fundamental in central Mexico (Peterson n.d.). The marriage almanacs provide some clues, for they pair the sun with couples who are likely to have the most children, and the moon and mixed (sun and moon) symbol with couples who are likely to have the fewest, as explained in Chapter 5. These symbols can operate independently of the other images in the marriage almanacs, thereby contributing their own separate mantic values to the prognostication.

Like the sun and moon, animals and artifacts can also function as static symbols as well as contribute meaning as elements within scenes. Some animals—such as the spider and scorpion—are characteristically inactive and unengaged with the beings and artifacts around them; they seem to communicate purely as symbols. But most animals have multiple roles: they participate in activities, they serve as landscape elements and thereby contribute to the richness of the locational setting, and they also bring their own symbolic value to the enterprise. A roseate spoonbill perched on the edge of a throne (Fig. 93, Plate 10) is part of the scene of an enthroned cult image of the rain god, but as a symbol the bird (with a fish in its mouth) also contributes associations and meanings of its own. A raccoon stands with banners of sacrifice on a hill (Fig. 23g), thereby creating a small scene; but the fact that it is a raccoon, rather than another animal, contributes its own meaning independent of the scene.

Artifacts often float in that area between symbol and attribute of a larger entity. Luis Reyes García (1997: 25–27) points out that implements and costume elements that have usually been identified as attributes of deities should better be considered as independently functioning symbols. In the mantic field of the twentieth *trecena*, for example, the deer stick (a specialized staff of priest/shamans; Fig. 30d) is held by Xiuhtecuhtli in the Telleriano-Remensis (24r) but floats as an independent object in the Borbonicus (20). The deer stick is thus not so much an attribute specifically of Xiuhtecuhtli as it is a pictorial statement conveying its own symbolic value. Such symbolic artifacts can appear separately or be clustered into complex groupings.

Language of Symbol and Metaphor

Meaning in the almanacs is thus created by the interplay of supernaturals, actions, cultural artifacts, and symbols. Usually the images are recognizable as direct, although conventionalized, representations of beings and things. Supernaturals are identified and differentiated from one another by their physical shape, face and body painting, and costume. Other beings and artifacts are depicted figurally. The forces of Tlazolteotl, for example, are called forth by her full image, which is characterized by a headdress of unspun cotton, a black patch around her mouth, weaving implements, and white clothing. The principle of synecdoche, a part standing for the whole, comes into play when the appearance of only her headdress of unspun cotton marks her presence. The presence of a supernatural then brings all the god's associations to bear on the prognostication.

Actions come when supernaturals and others pose, gesture, or otherwise engage in specific activities. These beings and their actions form scenes, which can be qualified by the artifacts being manipulated and by the landscape elements that further set the stage. Whenever landscape elements appear, the scene has required them, because purely decorative or embellishing elements are rarely used. The elements composing the scene jointly participate in the creation of meaning, for the message is not merely the presence of a certain supernatural or being but of some entity doing or having done to it a specific thing, and occasionally it is important that the action take place in a specific kind of location.

Complex actions include rituals and historico-mythic scenes that refer to ancient stories and truths. They can often be read superficially, but they usually have deep and multiple connotations. When the eagle and serpent do battle over the rabbit, for example, we recognize two predators fighting over choice prey (Fig. 32). But the eagle probably here represents the sun or daylight, and the serpent probably represents the night or darkness, because it is embellished with “night eyes” or stars. The rabbit is essentially an earth creature, the earth being born in the year 1 Rabbit.³⁴ The scene then can be read as the conflict between the sun and darkness, day and night, or specifically dawn (when the earth is claimed by the daytime sun) or dusk (when

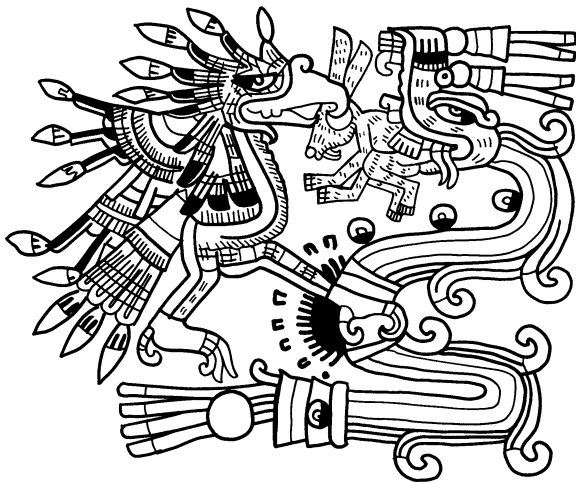


Fig. 32. Eagle and serpent doing battle over a rabbit. Drawing by Heather Hurst. *Source:* Borgia 52.

night again takes hold). The scene would surely have paralleled a verbal story, which unfortunately has not survived.

Although action scenes often employ symbolic elements within them, discrete symbols usually stand apart as independent communicators of meanings. They are artifacts or figural configurations that refer to concepts, forces, and events but do not necessarily represent them. The division between representation (or figuration) and symbolism, however, is not distinct. Most figural elements contribute symbolic meaning.

The images in the divinatory codices have absorbed meaning because of their associations. The rabbit, being associated with the earth, brings that meaning with it when it appears in the prognostications. The mantic field for *trecena* 11 (1 Monkey) in the Codex Borbonicus, for example, features the pulque god Patecatl and the eagle and jaguar warriors, who carry banners of sacrifice (Fig. 33). This pairing of warriors who will lose their lives with the pulque god reflects a habitual central Mexican association between pulque and warriors (Seler 1990–1998, 3:220; Taube 1993). Additionally, Taube (1993) has argued for a connection between pulque and the night or the starry night sky, which counterpoises well with the idea that the souls of sacrificed warriors became stars. Almost every image in divinatory almanacs has both surface meaning and metaphoric or associative meaning.

Behind the common pairing of the eagle and the jaguar, for example, is the understanding that these are the two most powerful air and land predators. As embodiments of the principal military orders (the eagle warriors, the jaguar warriors), they stand metaphorically for the conceptual category of warriors (Sahagún 1953–1982, bk. 10:23). They were also paired as sub-divine beings who offered themselves up in the legend of the creation of the sun, which tells how the eagle and the jaguar jumped into the sacrificial hearth to encourage the sun and moon to move through the heavens (Sahagún 1953–1982, bk. 7:6). The eagle was singed, and the jaguar was sooted, which accounts for the eagle's black-tipped wings and the jaguar's black spots. This pairing of beings who offered themselves in sacrifice is reflected verbally in the synecdoche "the tail, the wing," an Aztec metaphor for commoners (Sahagún 1953–1982, bk. 6:244). The jaguar symbolizes the authority of rule, and jaguar pelts cover royal thrones (Fig. 24c). The eagle-jaguar pairing additionally exists as an antithesis; for when the eagle stands as the sun and daylight, the jaguar (a nocturnal predator) stands as night and the underworld. This night or underworld jaguar is manifest as Tepeyollotl ("Hill Heart"), the jaguar god of the underworld. When curls of smoke are marked with jaguar spots, they may thus call up several of these associations. As this short exposition on the eagle and jaguar illustrates, mantic images in the almanacs are multivalent; they are packaged with layers of meaning and are meant to be read on several levels simultaneously. The challenge, of course, is to recognize the multiple meanings and associations behind the deities, actions, and symbols that appear in the almanacs.

The imagery in the divinatory codices is never simply straightforward. It works through association, allusion, and metaphor, where the desired meaning is often deeper than what appears on the surface. Visual metaphors work like verbal ones in using figural images of actors, actions, and objects to express ideas, concepts, forces, and powers. They abstract, condense, and explode ideas, and cast them evasively. The Nahuatl word for metaphor, *nahualtocaatl*, conveys the idea of something "disguised" or "hidden" (Heyden 1986: 35). Only those who know the many associations of an entity or image, who have been trained in the richness of Mexi-

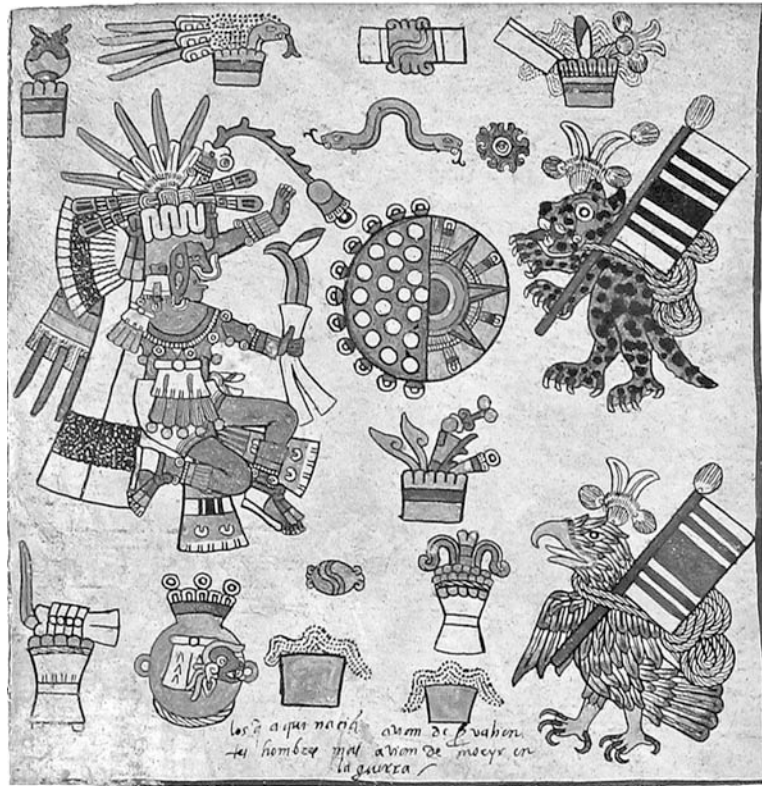


Fig. 33. Mantic field for the eleventh *trecena* (1 Monkey) features a pulque god and pulque jar and bowls along with eagle and jaguar warriors wrapped in sacrificial cords and carrying banners. Borbonicus 11. Photograph © Assemblée Nationale, Paris.

can metaphorical thought, are able to read the figuration on all levels and draw from these expressions the full interpretation. It was the task of the calendar priests and diviners both to interpret the deep symbolism of the divinatory books and also to guard the secrecy and power of the symbols.

All of this prognosticatory meaning exists in the almanacs because of the 260-day calendar and with respect to this calendar. The calendar is intellectually

prior to the prognostication and necessitates it. Almanacs exist only to bring together calendrical units with the prognosticatory information pertinent to them, to document the forces that shape and govern time. The calendrical units stand as the points of attachment for all the mantic meaning, and their arrangement and spatial organization govern the arrangement of the augural images.

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Structures of Prophetic Knowledge

The *tonalamatl* is a graphic discourse for conceptualizing time. It allowed the daykeepers literally to see time: to know it as being composed of discrete, concrete units that participate in interlocking cycles and to recognize these units and cycles through their visual manifestations. Even more important for the daykeepers, the *tonalamatl* allowed them to inspect and thereby comprehend, if only imperfectly, the unseeable but potent forces that surround and accompany these units and cycles of time. The almanacs manifest time, giving it concrete expression, by organizing and manipulating symbols and space. Individual units of time are depicted by the symbols of the day signs and coefficients (signifying days, *trecenas*, and other calendrical periods), but they are embedded in space that integrates them with all the other units. This space is abstract, neither topographic nor experiential, but a universal, topological space that is filled by and thus comes to represent measurable units of time. Time then is embodied and visualized by both symbol and space. The daykeepers mastered time, in all its uncertainties, by transforming it into readable and knowable images, spaces, and locations.

The almanacs accomplished this with a graphic syntax that defined the relationships between the different components as unequivocally as possible to yield

what Manfred Porkert (1974) has called systems of correspondence. As Porkert (1974:2) explains in his analysis of the theoretical foundations of Chinese medicine—which similarly concerns itself with relationships—“No effective position may be defined by itself; its definition calls for comparative reference to some other position. [When] systematic inductive links are established between data defined in accordance with conventional standards of value, the result is a system of correspondences.” The Mexican almanacs compose such a system. They link time to its prophetic forces by materializing units of time and their mantic influences, systematizing their direct linkages, and locating them within a structure that relates them to all the other units under consideration.

This structured materialization was achieved by joining data and exegesis from a multiplicity of almanacs, each with its own temporal and mantic focus and its own internal structure. Because time and its prophetic properties are inherently unrepresentable—there is no single way to present such a multidimensional omnipresence with any accuracy—the creators of the almanacs developed a variety of graphic strategies to approach it. Each strategy focuses on only a few aspects and explains only a few properties; but in combination with understandings from all the other strategies, they

reach a much fuller approximation of reality. Together the multiple almanacs made visible and palpable the unrepresentable character of prophetic time.

General Principles Governing Structure

Although these multiple almanacs operate independently and have their own internal structures, some general principles nevertheless govern the way all the material is presented in the divinatory books. The page, the two-page spread, the register, and the cell all participate in organizing material. These features are depicted in the diagrams in the Appendix.

Fundamental to the divinatory books is the page format. The page, created by the folds in the screenfold, causes information to expand and compress in order to fit within its edges and at the same time achieve either a balanced composition or a uniformly dense patterning. The page exerts its authority by creating natural beginning and ending points for almanacs, protocols, and other presentations. Although almanacs often extend over several pages, they usually span the entire width of a page rather than beginning and ending in the middle (Fig. 34).¹ Likewise, the protocols almost always respect the edges of the page and spread their data to cover the page's width.² The narrative section in the Borgia usually also adjusts its scenes to fit a single page except when compositions must extend over two pages.

Beyond the page, the two-page spread (two pages that face each other across an internal fold) also exerts a unifying influence on the material it contains. Nearly a dozen almanacs are organized to span facing pages; and other, longer almanacs use facing pages to present complementary or related information.³ For example, the great *in extenso* almanacs that open the Borgia, Cospi, and Vaticanus B (discussed below) run the thirteen days of the *trecenas* across facing pages. The two-page scenes in the Borgia narrative section are also located on facing pages. When separate one-page almanacs and protocols contain similar or related information, they, too, are usually located opposite each other on facing pages. This conditioned respect for the authority of the page and for the unifying influence of the two-page spread

across an interior fold is also seen in the Mixtec historical and genealogical codices, which usually organize their narratives to fit either a single page or a two-page spread over an interior fold (Johnson 2005:135–136).

For most of the almanacs, however, the pages (and even the two-page spreads) themselves do not have supreme authority over the presentation of material, as they do in bound books of the Western world and in the Mexican protocols. In Western books, such as this one, information is consistently presented within the confines of a page by a linear run of writing that begins at the top left and continues left-to-right to fill the page until it ends in the lower right corner; any illustrative material is fit within the page. Each page thus presents a block of related data, and each is read in its entirety before the reader moves on to the next. In contrast, the almanacs usually arrange their material sequentially over horizontal registers; it is the register that truly defines the presentation of data. Almanacs follow the registers either as they turn back on themselves to occupy a single page completely or as they flow across the lower or upper portions of several pages.⁴ Although adjacent almanacs may share the same registration, most do not, so that we periodically see a shift in the pattern of registers from page to page.

Within the space of the almanac, information is divided up and arranged in rectangular boxes, which I call cells. In each almanac, the cells that frame data of the same kind (e.g., day signs) have the same dimensions, unless there is a problem with fit. In these cases, their width can expand or contract to fit within the boundary of a page; or, in rare cases, the cells can span the interior fold between pages.⁵ Regardless of these subtle adjustments, the cells function visually to “stabilize the inventory of visual concepts.”⁶ This cellular composition generally parallels what James Lockhart (1985: 468) sees as a cellular template in Nahua thought and expression. As Lockhart points out, the cellular “organization by symmetrical arrangement of equal independent parts” is characteristic of preconquest Nahua cosmology, land allocation, oracular expression, and even grammar.

When these graphic cells in the almanacs were voiced in Nahuatl they were probably called *calli* or house (Sahagún 1953–1982, bk. 4:11, 19ff.), which, strikingly, is what Europeans called functionally similar mantic

divisions.⁷ This, of course, raises the question whether this term was used before the conquest or was a European transplant, because the only record we have of its expression comes from postconquest chroniclers who may have been influenced by European usage. Sahagún's usage, however, suggests that it may have been indigenous. When he referred to the "second house," meaning the second position (2 Rabbit) in a *trecena*, he wrote *injc ontetl calli*, which translates as "two round/stone thing house" (Sahagún 1953–1982, bk. 4:11); the "round/stone thing" prefix very likely refers to the two disks indicating the coefficient 2. This usage indicates that *calli*, European or not, was by the 1570s fully integrated into Nahuatl grammatical expression.

The borders between pages, registers, and cells are articulated by red lines of the same thickness.⁸ Throughout a codex, the red lines keep their constant width regardless of whether they frame a large mantic scene or only a single day sign. When multiple scenes and almanacs share the same pages, the consistency of the red line mutes rather than accentuates distinctions between cells within almanacs and between the almanacs themselves, making it difficult sometimes to tell which cell belongs to which scene or almanac. Where page breaks coincide with cell borders, they are also lined in red. Border colors other than red are never used in the almanacs, although black lines can separate presentations in the ritual protocols. These red framing lines are even more inviolate than the page breaks. Whereas problems of fit might require a painter to extend an almanac into an additional half-page or to bridge an interior page fold with a cell, the red borders that frame the divinatory components are not canonically violated. There are a few cases of sloppiness, to be sure, but the two instances where elements of mantic scenes cross over into other cells appear to be meaningful violations that are part of the message being communicated.⁹

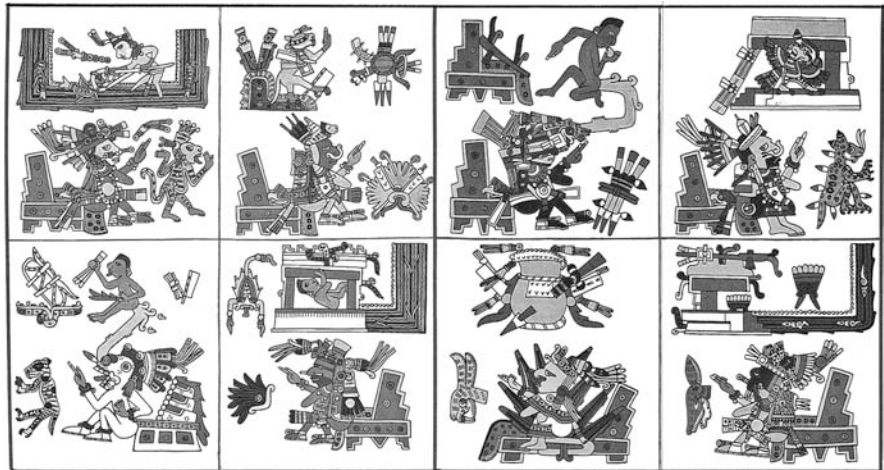
Similar red framing or border lines are employed to separate the registers and fields of the Mixtec historical screenfolds, and they frame elements in the Maya almanacs as well. This suggests that the red color signifies a framing or boundary line. The principal structural difference between the divinatory codices and the Mixtec historical screenfolds—which both employ registers—is that the content of the former is segmented by cells

into many tightly controlled, discrete units, whereas the contents of the histories flow more freely along the registers.

Reading Patterns

The reading order of an almanac is easily discoverable because the day signs almost always face in the direction in which they are to be read. Most of the deities and other figures associated with the signs also face in this direction, but the day signs themselves are a surer guide.¹⁰ Most of the almanacs in the divinatory corpus, as well as the manuscripts themselves, read from right to left. The Tonalamatl Aubin, Borgia, Fejérváry-Mayer, Laud, and Porfirio Díaz Reverse all read in this direction. The almanacs in the Borbonicus and Cospi, however, read the opposite way, from left to right. The Vaticanus B is split; its obverse reads from left to right like the Borbonicus and Cospi, and its reverse reads from right to left like the Borgia and others. This change in reading order seems intentional: when the reader lifts the top cover of the Vaticanus B (the cover with the trace of turquoise ornament) and folds the cover to the left, the first page of the obverse is revealed; and when the reader folds the cover to the right, the first page of the reverse appears. Although the preferred reading order seems to have been from right to left, there was clearly a choice.

The calendrical units, in association with their deities and images, flow sequentially within each almanac. If almanacs cover several registers over one or several pages, they almost always begin in the lower right cell and read in a boustrophedon fashion: to the left across the bottom register, to the right across the middle register, and to the left again across the top register, if there is one (Fig. 37). The only real exception comes with the *in extenso* almanacs (discussed below under the table format), where the 260 days of the count are listed sequentially in five rows of fifty-two, and the rows are read in one direction only (Figs. 39, 40). In this case the rows maintain the same directional flow in order to correlate the mantic significance of every fifth *trecena*; it is a purposeful ordering. A little over a dozen almanacs—particularly in the Borgia and Vaticanus B and, of course, the famous page 1 of the



Fejérváry-Mayer—present calendrical information in a roughly circular presentation. When a circular track is employed, the calendrical units read in a generally counterclockwise sequence; none read clockwise. This counterclockwise sequencing may reflect the preferred direction of circumambulatory rituals in preconquest central Mexico.¹¹

Almanac Structure

The 102 pictorial almanacs that have survived are very different in terms of complexity, size, and prophetic focus, but the graphic structures that organize their contents fall into three basic types. We can recognize these structures as having the properties of lists, tables, and diagrams. Although these are modern Western terms, their use can, I believe, help us focus on the almanacs' structural properties rather than their iconography and prophetic message.

In the abstract sense, the purpose of all the almanacs, as with all information graphics, is to record discrete elements, organize these elements structurally, and explain the relationships between the different parts. In this sense they have the same purpose as many graphics that today support chemistry, logic, and statistical analysis. Structurally also, they have much in common with the kind of conceptual diagramming found in chemistry and logic and with tabular and list graphics otherwise found in statistical analysis (Boone 2004, n.d.c). Like these other graphics, the Mexican alma-

nacs employ space, proximity, adjacency, sequence, and the properties of inclusion and exclusion to convey meaning.

In the divinatory books, the almanacs structured as lists and tables are compartmentalized as a linear course along registers, and they make the best use of cells to distinguish and compare data. The list organizes material according to sets arranged in a sequence. The table is in many ways a complex list, for it presents data in sequential sets but multiplies and layers them; it achieves meaning both by the sequences and by the intersection of the horizontal and vertical axes. The third structure, the diagram, presents material as a form or shape; it conveys meaning according to the iconic or symbolic value of that form and the parts of which the form is made. Some diagrams also employ cells effectively, but they depend less on the cellular structure than do lists and tables. Variations and blendings of these three schemes add to the presentational richness.

List

The simplest way to relate a series of things to another series of things is in a list, particularly in a list where there is a clear correspondence between the elements put into association. In this kind of graphic, the elements of one set are presented sequentially, usually in a line, and subsidiary elements are then put into direct association with them. When lists like this involve time, specialists in information graphics refer to them as sequence charts or time lines, which consolidate and dis-

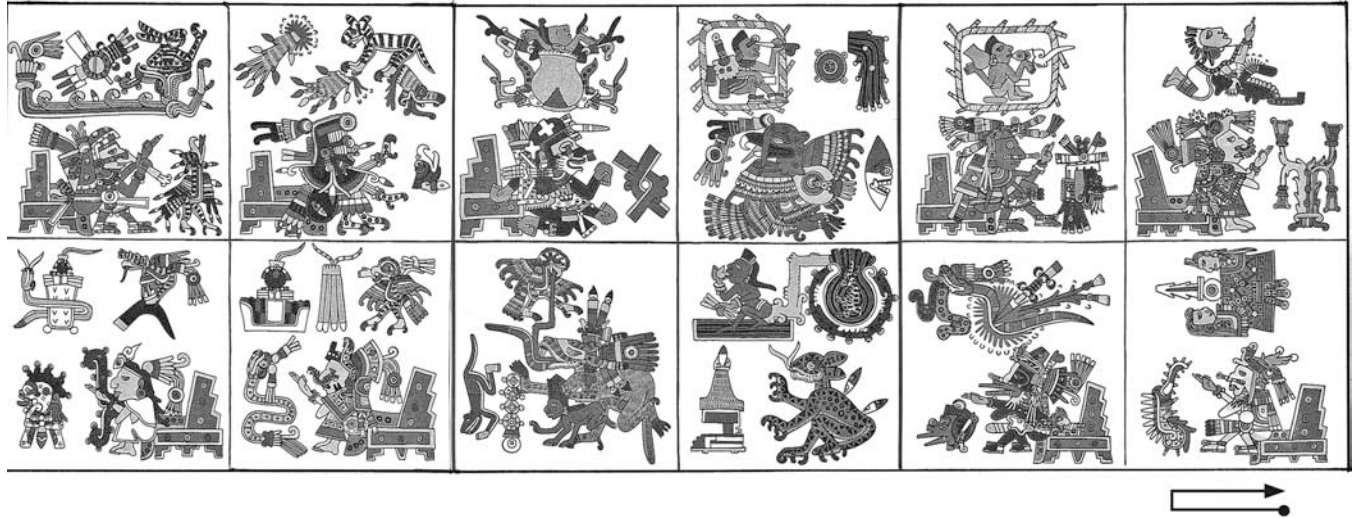


Fig. 34. The twenty day signs and their patrons and mantic influences presented as a list of twenty cells, spanning five pages. Borgia 9–13 (configured from Díaz and Rodgers 1993).

play time-related information (Harris 1999:347, 417). The Aztecs used time lines, segmented into years, as the structural foundation for their annals histories. Central Mexican manuscript painters used variations of the list format for almost half of their almanacs. In its most basic form, the list links one temporal unit with one mantic element, as a one-on-one correspondence. But lists can also group several units of time with a single mantic element.

A basic list is the almanac that spans the two registers of Borgia 9–13, which associates the twenty day signs with their patrons and mantic scenes (Fig. 34).¹² Each day sign is provided with its own cell, and the patron and divinatory scene associated with it are located in the cell along with the day sign. The day signs are listed sequentially, beginning in the lower right with Crocodile and running left along the bottom register to Lizard, then continuing right along the upper register until the signs finish with Flower. Horizontal adjacency functions actively here to string the cells together in a series; vertical adjacency is passive except when the sequence must move from the lower register to the upper register after Lizard (Borgia 13). A certain circularity is implied, because the sequence spatially turns back on itself, so that after the last day sign (Flower), the first (Crocodile) appears below. Although this spatial organization satisfies our desire for cyclic conti-

nunity, which may also have been shared by the painter, the almanac's principal goal is to link each day sign with its specific mantic elements.

The use of the cell achieves this linkage well, because it physically encloses the elements and thereby relates them unambiguously. It is very clear, for example, that Crocodile is associated with the old creator god Tona-tecuhtli, seated on the throne (Fig. 35). The day is also associated specifically with the generative forces of the first procreating couple (who face each other under a precious cape of turquoise and jade). The next day, Wind, is clearly tied to Quetzalcoatl in his manifestation as Ehecatl the wind god, also sitting on a throne. That day is additionally associated with the sacrifice of a coral snake, who emits dark supernatural forces from its mouth (as breath or speech) while it is dramatically pierced by an arrow, its blood spurting forth. Each cell thus has three occupants: the day sign, a supernatural patron of the day, and a mantic scene.

Space within the cells does not itself carry meaning (except where the elements of individual mantic scenes are united as in a tableau). In each cell, the three different occupants (sign, patron, and scene) do not interact spatially; they simply appear *with* one another. The elements that organize this presentation are the red lines forming the cells, which function to include those elements that are pertinent and to exclude all others; this

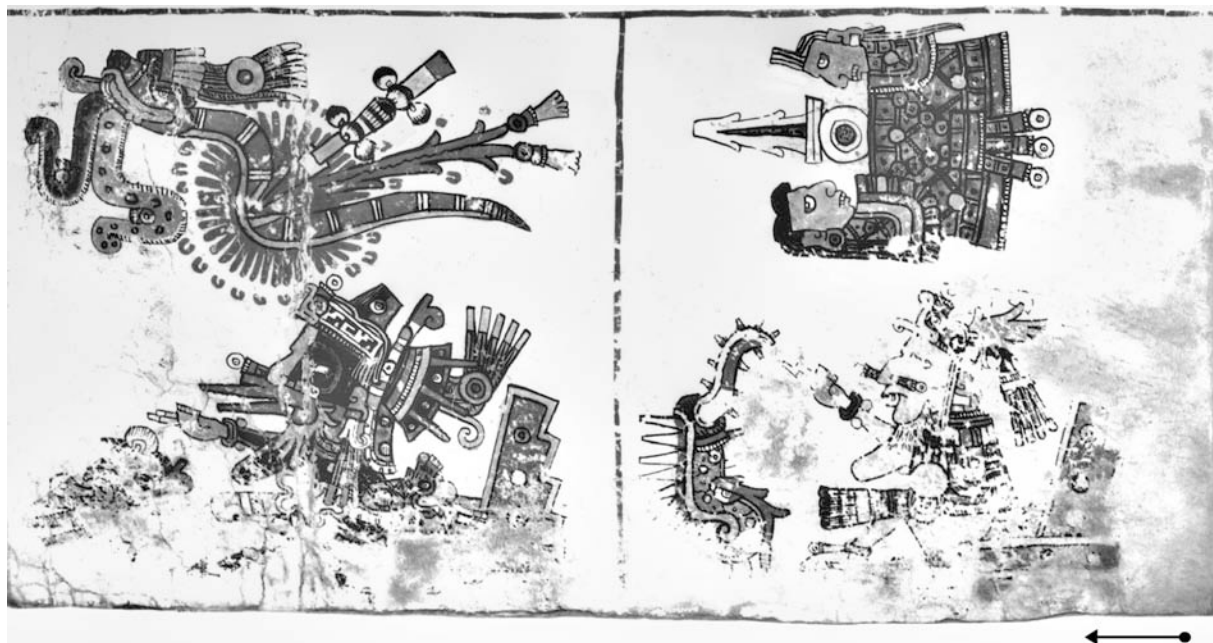


Fig. 35. The first two day signs, Crocodile and Wind, presented together with their patrons and scenes in their cells. Borgia 9b. Photograph © Biblioteca Apostolica Vaticana.

means that the relationship of each part to the others is perfectly clear. The list format, featuring cells of equal size, also ensures that each temporal unit has the same weight.

In this simple list, each cell contains both the calendrical element and the mantic elements associated with it. Usually, however, the calendrical elements occupy their own cells. Such is a cognate presentation of the twenty day signs with their same patrons and mantic scenes in the Vaticanus B, which locates the signs, patrons, and scenes in separate cells, stacked one above the other (Fig. 36). The Vaticanus B's small page size means that these stacked cells fill the height of the page. Here the day signs occupy the lower cells, their patrons are just above, and their mantic scenes are uppermost. The linkage between the day signs and their mantic influences is conveyed by their vertical adjacency, which is active in this almanac. It is the horizontal adjacency of the units that then strings them together side by side as a sequence (as in the Borgia almanac). The Vaticanus B cognate presents the same information as Borgia 9–13, but it separates each element.

Grouped List A variation on the basic list is the grouped list, where several day signs are grouped together in association with a single mantic unit. Thirty percent of the almanacs are grouped lists. Such a grouped list appears on Borgia 55, where the twenty day signs are associated with a series of six traveling or walking supernaturals (Fig. 37). Seler (1901–1902:164–165, 1963, 2:129–136), following an astral perspective, interpreted them as six “heavenly wanderers” (the sun, moon, and stars); but the almanac is generally understood to signal the fate of one taking a journey (Anders, Jansen, and Reyes García 1993:297).¹³ The almanac begins in the lower right with Crocodile and runs left, right, and left in a boustrophedon pattern up the three registers, finishing with Flower in the upper left. The principle of vertical adjacency links the grouped day signs to the traveler just above them. The day sign cells also are painted tan or gray and have footprints on them, which effectively transforms them into the very roads on which the supernaturals walk, so that the supernaturals walk on the road of time. The first two day signs (Crocodile and Wind) are assigned to the sun god Tonatiuh, who makes rich offerings at a temple.

The next three day signs belong to Tlazolteotl in the following scene, who appears with the moon and a sacrificed coral snake; the next four to a turquoise-covered Quetzalcoatl-like figure who exudes preciousness; and thus the list continues. In some grouped lists, the signs are grouped equally (five groups of four signs, for example), but here they vary from two to five per figure. The footprints in this almanac do not seem to have a specific meaning other than to characterize the road and to emphasize the fact that time moves from one day sign to another.

A further variation on the basic list occurs when some of the signs in the grouped list are replaced by disks or spacers. This occurs in an almanac on Fejérváry-Mayer 30a–32a, which is cognate with Borgia 55 (Fig. 38). In the Fejérváry-Mayer, the twenty day signs are again associated with six travelers; but instead

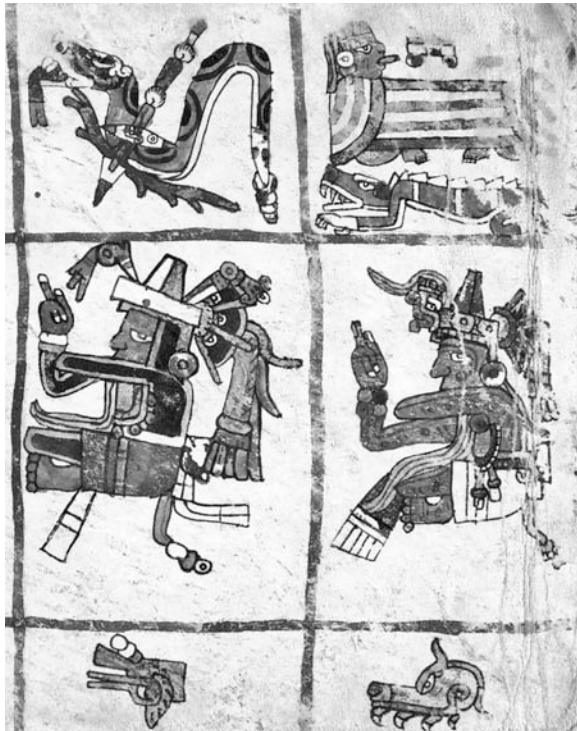
of depicting all the day signs, the scribe painted only one day sign each with the first five travelers and replaced the unpictured days with disks. The first traveler has the day sign Crocodile, with Wind signaled by a disk; the second traveler has House, with Lizard and Serpent signaled by two disks; the third traveler has Death, with Deer, Rabbit, and Water signaled by the three disks; and so on, the disks substituting for some of the day signs in this manner.¹⁴ Almost half of the grouped lists in the existing corpus employ such spacers.

These two cognate almanacs in the Borgia and Fejérváry-Mayer are very close calendrically and iconographically, although they are not identical. The first scenes are virtually the same; but in the second scene, for example, the female is accompanied by a sun disk in the Fejérváry-Mayer, instead of the moon in the Borgia, and the females themselves are slightly different. The final scene, featuring Huehuecoyotl (Old Coyote), pertains to three day signs (Flint, Rain, and Flower) in the Fejérváry-Mayer, but only two signs (Rain, Flower) in the Borgia. Each painter may be stressing slightly different prognostications, while staying within the general canons of the almanac.

In cognates such as these, where one almanac employs spacers and the other does not, the augury of each scene seems to pertain equally to the associated day signs, whether these are pictured or replaced by spacers. This strongly suggests that the spacers are functionally equivalent to the missing day signs. When they appear, spacers must thus mark the active presence of day signs rather than their absence.

Both simple and grouped lists place a linear order on the elements displayed, and they convey a strong sense of sequence. List almanacs chain the day signs together in a fixed and unbreakable series, making clear the precise location of each sign in the series. The principle of adjacency juxtaposes each sign and its force with those that immediately precede and follow them, facilitating and encouraging their comparison. The list characterizes the experience of time as a linear track that moves from one day to the next and from one set of mantic forces to the next, often with dramatic shifts in prophetic meaning.

Fig. 36. The first two day signs, Crocodile and Wind, presented in the lower cells, their patrons in the middle cells, and their mantic scenes in the upper cells, Vaticanus B 87. Photograph © Biblioteca Apostolica Vaticana.



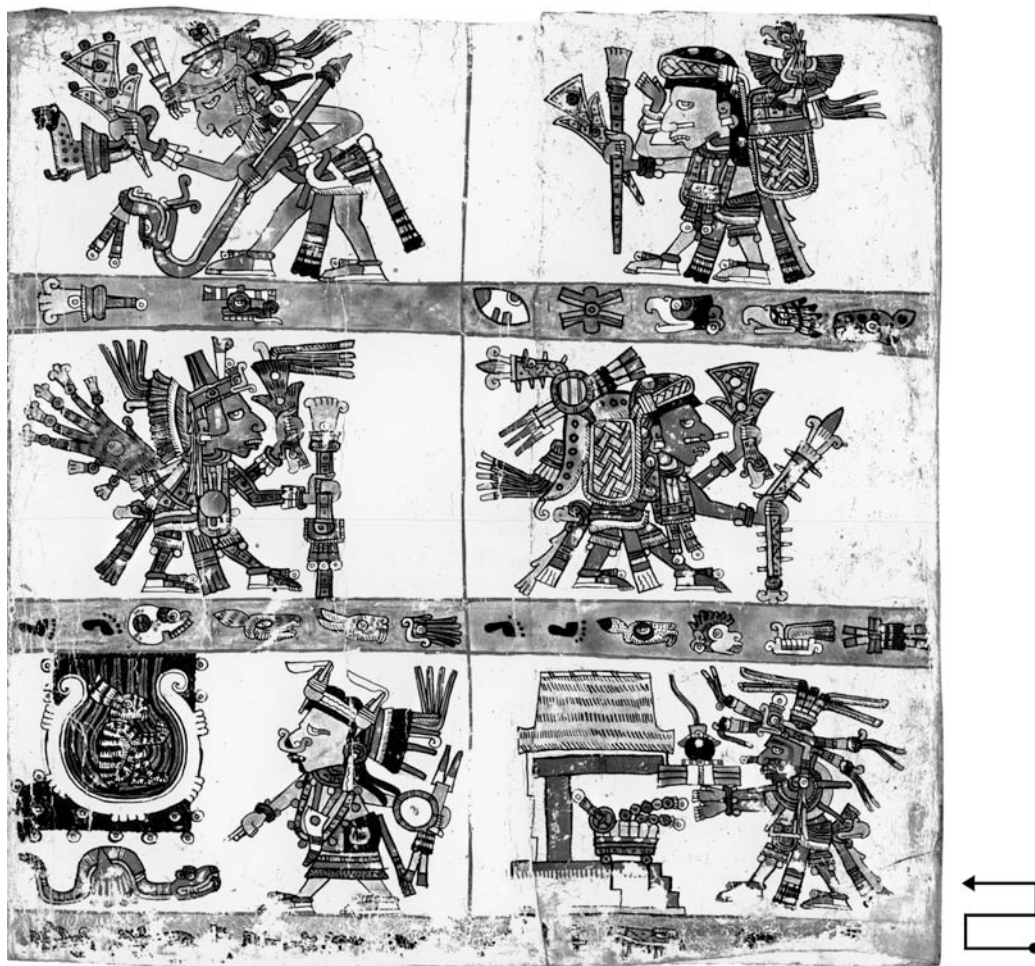


Fig. 37. The twenty day signs associated with six supernatural travelers, structured as a grouped list. Borgia 55. Photograph © Biblioteca Apostolica Vaticana.

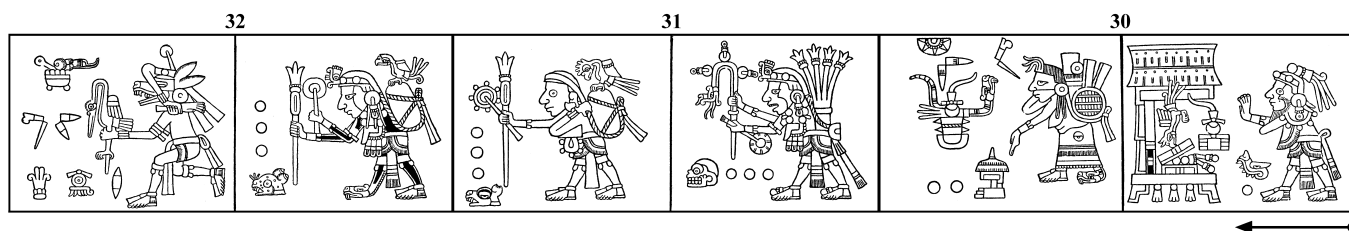


Fig. 38. The twenty day signs associated with six supernatural travelers, structured as a grouped list, but with spacers standing in for unpictured day signs. Fejérváry-Mayer 30a–32a (configured from Seler 1901–1902).

Table

These list almanacs of the twenty day signs, like all lists, are repeatable. They can be strung out end to end to achieve a longer, redundant sequence, but repeating lists are most efficiently stacked vertically and presented as a table. The table format is the way the great *in extenso* almanacs are presented (Figs. 39, 40). These large almanacs—called *in extenso* because they picture all 260 days of the cycle—come at the beginning of three of the divinatory codices: the Borgia, Cospi, and Vaticanus B.¹⁵ They are clearly of major importance, because they open and occupy the first eight pages of these almanacs. In them, thirteen repetitions of the day sign list, beginning always with Crocodile, sequentially flow across five horizontal rows that run continually for eight full pages or four two-page spreads. Each eight-page row contains fifty-two days, or a fifth of the 260-day cycle. The spread of each row across two facing pages contains thirteen days (a *trecena*). In the Borgia the rows on the right page have six day signs, and those on the left page have seven.¹⁶ In the Borgia, too, the day signs begin in the lower right and read from right to left; after they reach the end on page 8, they jump back to the next higher row on page 1 and read again from right to left, so that the sequence flows like lines of a prose text, except exactly in reverse.¹⁷ The days in the first column are thus the 1st day, 53rd day, 105th day, 157th day, and 209th day in the 260-day count; they begin the first, fifth, ninth, thirteenth, and seventeenth *trecenas*.

Above and below these five rows are elements, figures, and scenes that give meaning to the day signs. They, like the day signs, are controlled by the red grid lines that create the horizontal rows and the vertical columns that unite and separate the day signs and elements. Because the mantic elements are located above and below, the days take their meanings from their columnar axes and share the fates at the top and bottom. Thus, in the first column (beginning at the bottom), Crocodile, Reed, Serpent, Movement, and Water share the association with the priest who stands in or on a body of water and holds a bone awl and maguery spine used in bloodletting as well as an incense pouch, and above with the man seated in a temple who holds similar instruments for drawing blood. These are surely days for ritual bloodletting. We do not know whether

the relative position of a day sign in the column relates it more to one scene than to the other: if the upper day signs relate more to the upper mantic scene than to the lower. Nowotny (1961:229, 2005:248) proposed that the lower scenes were more ritual in character, whereas the upper scenes were more divinatory, but Anders, Jansen, and van der Loo (1994:139–140) have instead suggested that the two scenes may pertain to different realms of cultural experience, the upper to affairs of the state and the lower to everyday life, for example. These represent only some of the possible interpretations, however.¹⁸

The horizontal rows are not assigned specific mantic associations; their associations are calendrical. The reader would immediately recognize that each row (along its eight-page length) represents a fifth of the cycle and that each two-page spread represents the thirteen days of a *trecena*.¹⁹ The reader would also know without it being specified that the numbers 1 through 13 are automatically attached to these days. The first column on the right page carries the implicit number 1, the second column 2, the third column 3, and so forth. As the reader opens the almanac to other pages, he or she might note correspondences between the mantic elements associated with the different positions, for prognosticatory elements sometimes reappear in these positions. The second positions in different *trecenas*, for example, are comparable (Fig. 41). The second position in the first *trecena* features a descending eagle and rich offering vessel (top) and a skull, crossroads, and coral snakes (bottom). The second position in the second *trecena* again pictures the coral snake, here grasped by a man seemingly strangling himself with his own cords of sacrifice, while above a death creature holds a bound victim. The second position of the third *trecena* presents (bottom) the dire crossroads again, here with a conflicted couple; perhaps this represents a case of adultery caused by the well-ornamented woman just above them. There is a great deal of variation in the fates from column to column, but some themes and elements do tend to reappear in certain positions.

As in the simple list of the twenty day signs and their attributes, this table uses the cell, here more fully elaborated as a grid, to separate and unite the days and fates. A day sign's spatial location determines its fate, for it is the sign's occupation of a column that relates it to the elements below and above. Spatial location also

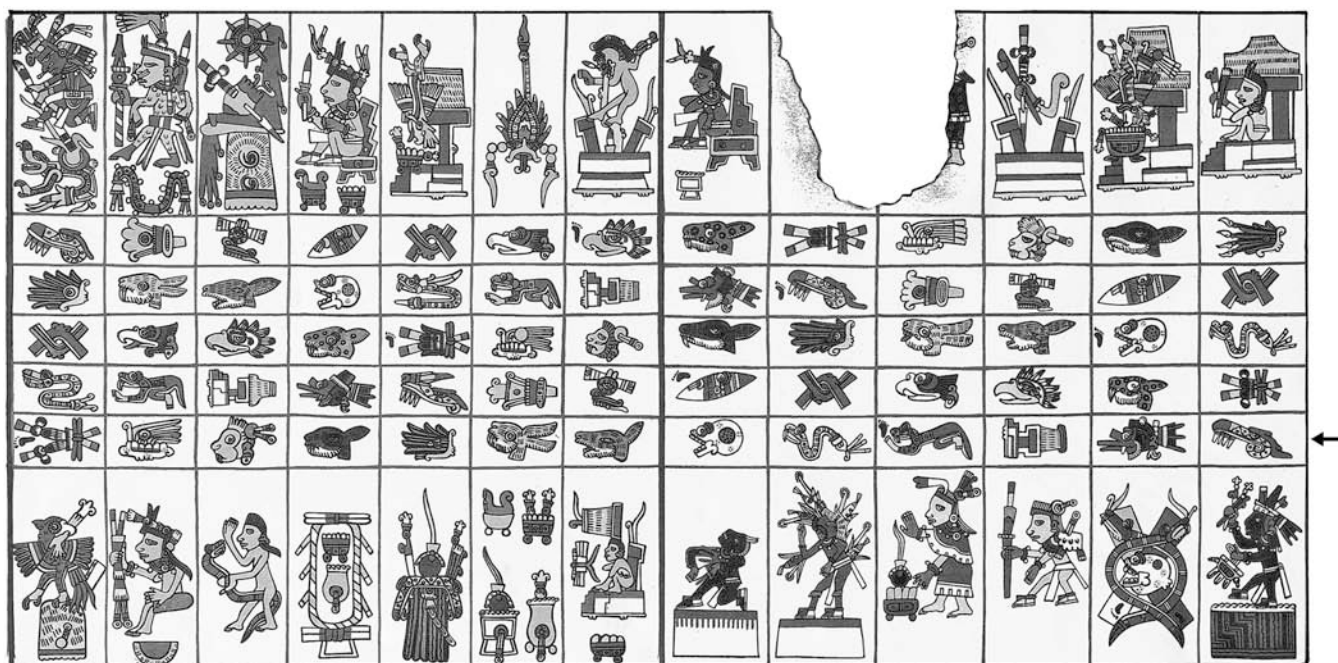


Fig. 39. First two pages of the *in extenso* almanac that opens the Codex Borgia, pp. 1–2 (configured from Díaz and Rodgers 1993).

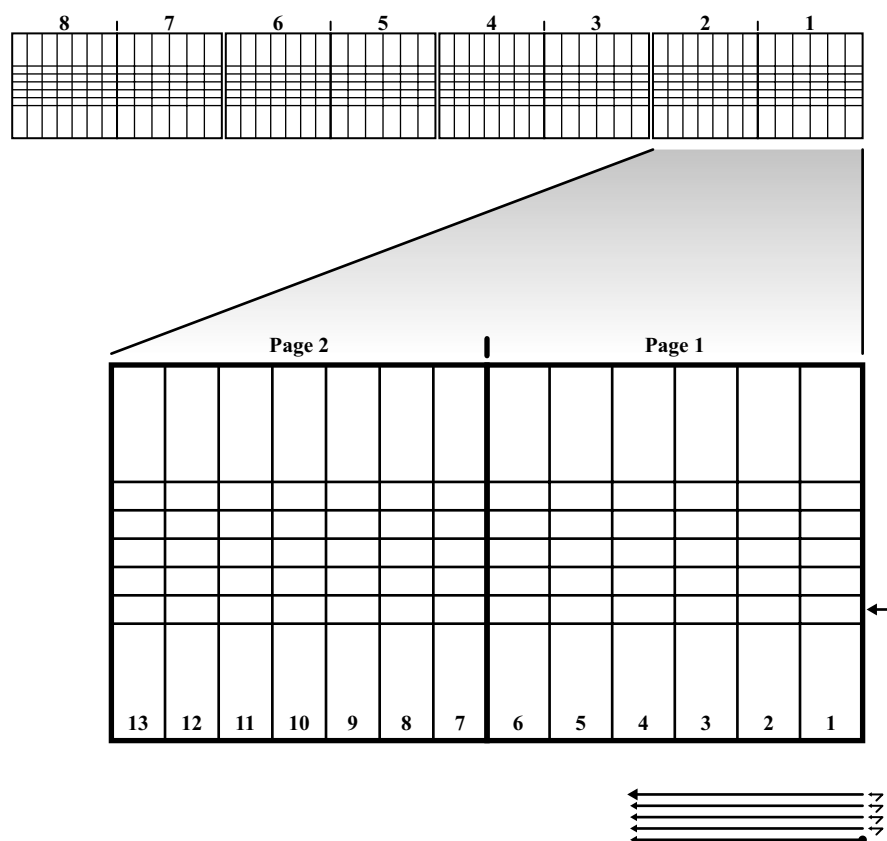


Fig. 40. Diagram of the *in extenso* almanac on Borgia 1–8. All 260 days in the *tonalpohualli* are pictured in five horizontal registers that run from right to left the full eight pages. The stacked registers create fifty-two columns. Diagram by Markus Eberl.

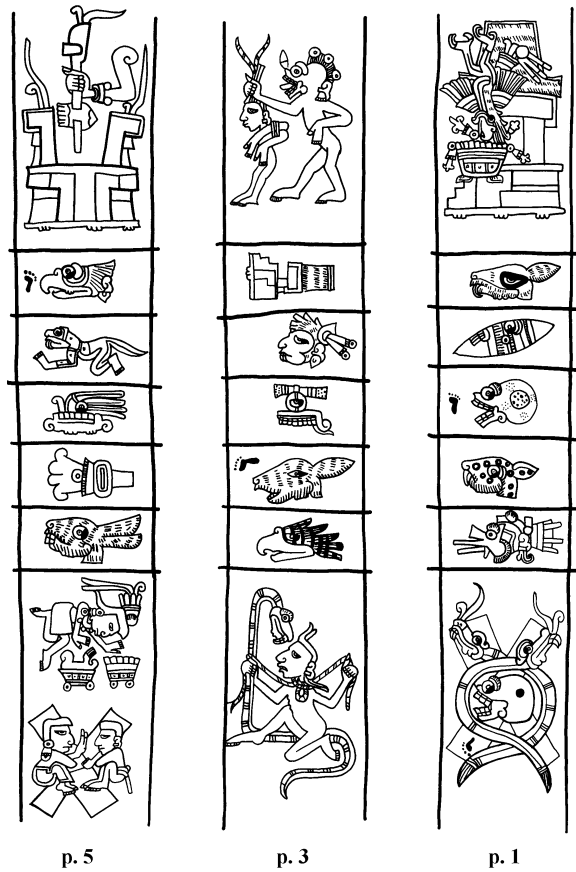


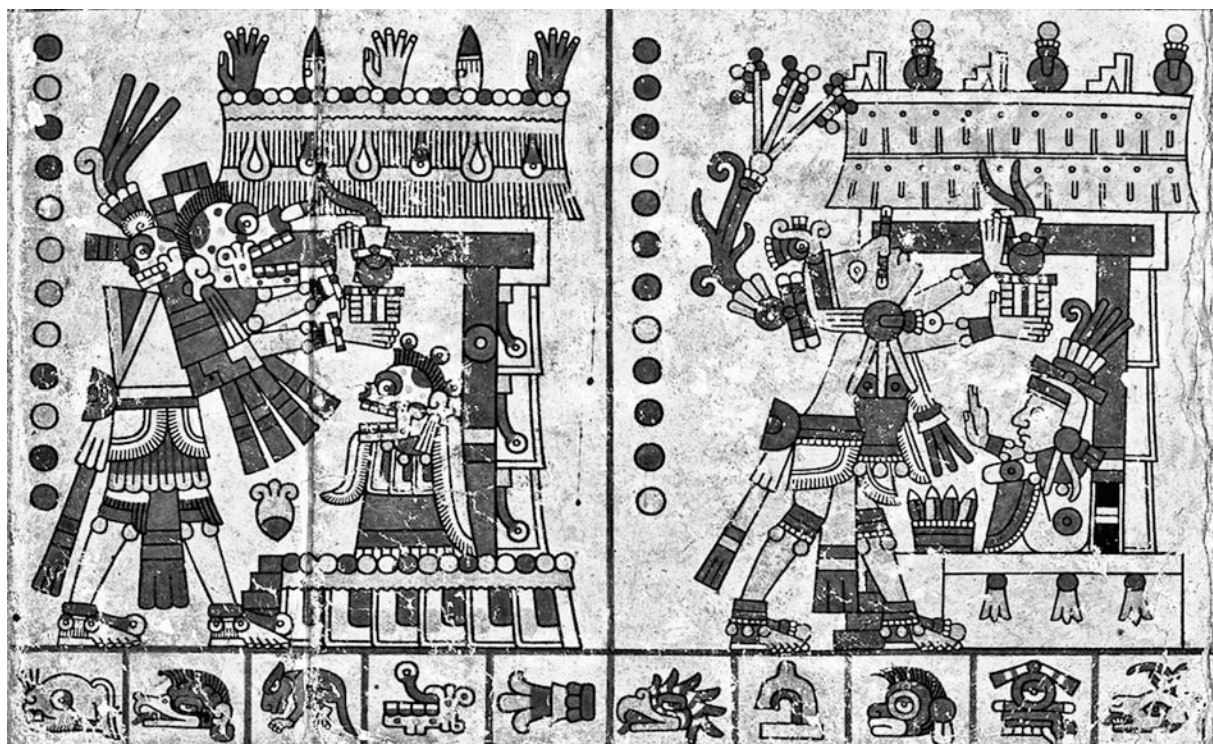
Fig. 41. The day signs and mantic scenes of the second position in the first three two-page spreads (or first three *trecenas*). Borgia 1, 3, 5. Drawings by Heather Hurst.

implicitly links columns in the same relative position from *trecena* to *trecena*, so that the second days of the different *trecenas*, for example, carry some associated meanings. The table (more so than the simpler list) shows patterning in the mantic data and reveals complex multidirectional relationships. This format presents a great quantity of precise information in a structure that facilitates ready inspection of individual data and quick comparison between potentially related phenomena. The nuances of these kinds of relationships would be impossible to render in words and sentences. What the painter has provided is a complex system of correspondence that allows the user to extract shades of meaning from the grid.

Imbedded within this almanac in the Borgia and Cospi (but not the Vaticanus B) is yet another count. Beginning with the fourth day sign (Lizard) in the lower row, black footprints appear along the count at intervals of 9×9 , 7×7 , 9×9 , 7×7 . Thus, footprints begin on [4] Lizard (p. 1) and appear eight more times on every ninth day, for a total of nine times (81 days); then they appear seven times on every seventh day (49 days); then nine times on the ninth day (81 days); and finally seven times on the seventh day (49 days). They end on [10] Movement in the top row, after which they return to [4] Lizard to repeat the cycle. The significance of this imbedded count is not known, but it surely carries supplemental mantic value. Counts of multiples of nine and seven are featured in several ritual protocols (discussed in Chapter 6), where the counts enumerate sets of objects being offered. Counts like 9×9 and 7×7 are still used in rituals by some contemporary peoples like the Mixes, who associate multiples of nine with men and multiples of seven with women, although the exact meaning of these multiples has surely changed over the centuries.²⁰

Compressed Table In the surviving divinatory books, the *in extenso* almanac (in its three appearances) is the only almanac to employ the full tabular format. Much more common are almanacs that are structured as compressed tables. These operate like grouped lists, in that groups or sets of day signs are associated with individual mantic elements; but as they repeat and recycle through themselves, they are structurally closer to tables. Nearly a fourth of all the almanacs have this structure.

In almanacs like this, each mantic field has several sets of signs associated with it. Usually the first sign in each set is depicted, framed in a cell next to the first signs of other sets, and all the other signs are replaced by spacers. The lower register of Fejérváry-Mayer 33–34 is a good example (Fig. 42, Plate 2). It, like most of the others, involves all 260 days, grouped into the twenty thirteen-day *trecenas*. The almanac, then, concerns itself more with the *trecenas* (as sets of days) than with all the individual days. The *trecenas* are identified by their initial day signs (Crocodile, Jaguar, Deer, Flower, Reed, etc.), and the other twelve days in the *trecenas* are signaled by spacers; here the spacers appear



within the mantic field, listed in a column to the left of each scene.

In this almanac the *trecenas* are associated with four scenes of a supernatural or deity impersonator making an offering before a temple and cult figure.²¹ The first *trecena* (Crocodile) pertains to the first scene, the second *trecena* (Jaguar) to the second scene, the third (Deer) to the third scene, and the fourth (Flower) to the fourth scene; then the fifth *trecena* (Reed) returns to the first scene, to set up the progression all over again: the sixth *trecena* (Death) with the second scene, the seventh *trecena* (Rain) with the third scene, and so forth. By the time all twenty *trecenas* are counted out, the reader has passed through the almanac five times.

This compressed table groups the days together in the same way they are gathered in the *in extenso* almanac just discussed (Borgia 1–8; Figs. 39, 40), but whereas the *in extenso* almanac presents all the days of each *trecena* across a two-page spread, here each *trecena* is abbreviated and grouped with a single scene. The days in both almanacs return to a spot next to the starting point (on the first page or below the first scene) after they have passed through the sequence once. The

similarity between the almanacs might be clarified if we imagine that the *in extenso* almanac depicted only the first day sign in each *trecena*, replaced the others with spacers, and related each two-page spread to a single scene; this would give us the grouped table on Fejérváry-Mayer 33b–34b. In both almanacs the first, fifth, ninth, thirteenth, and seventeenth *trecenas* are all related as kindred units, pertaining to the first scene in Fejérváry-Mayer 33b–34b and to the first two-page spread in Borgia 1–8. The second grouping associates the second, sixth, tenth, fourteenth, and eighteenth *trecenas*, and so forth in this manner. The beauty of the compressed table is that it presents the mantic associations for many temporal units in a very small space. Whereas the *in extenso* almanac in the Borgia fully occupies eight pages, the compressed table in the Fejérváry-Mayer needs only the lower register of two pages.

This compressed arrangement, with its repeating progression from cell to cell, is nearly identical to that in the Maya almanacs (Fig. 43). The Maya almanacs read from left to right and locate the beginning day signs (the equivalent of the signs below the first scene in Fejérváry-Mayer 33b–34b) in columns on the left

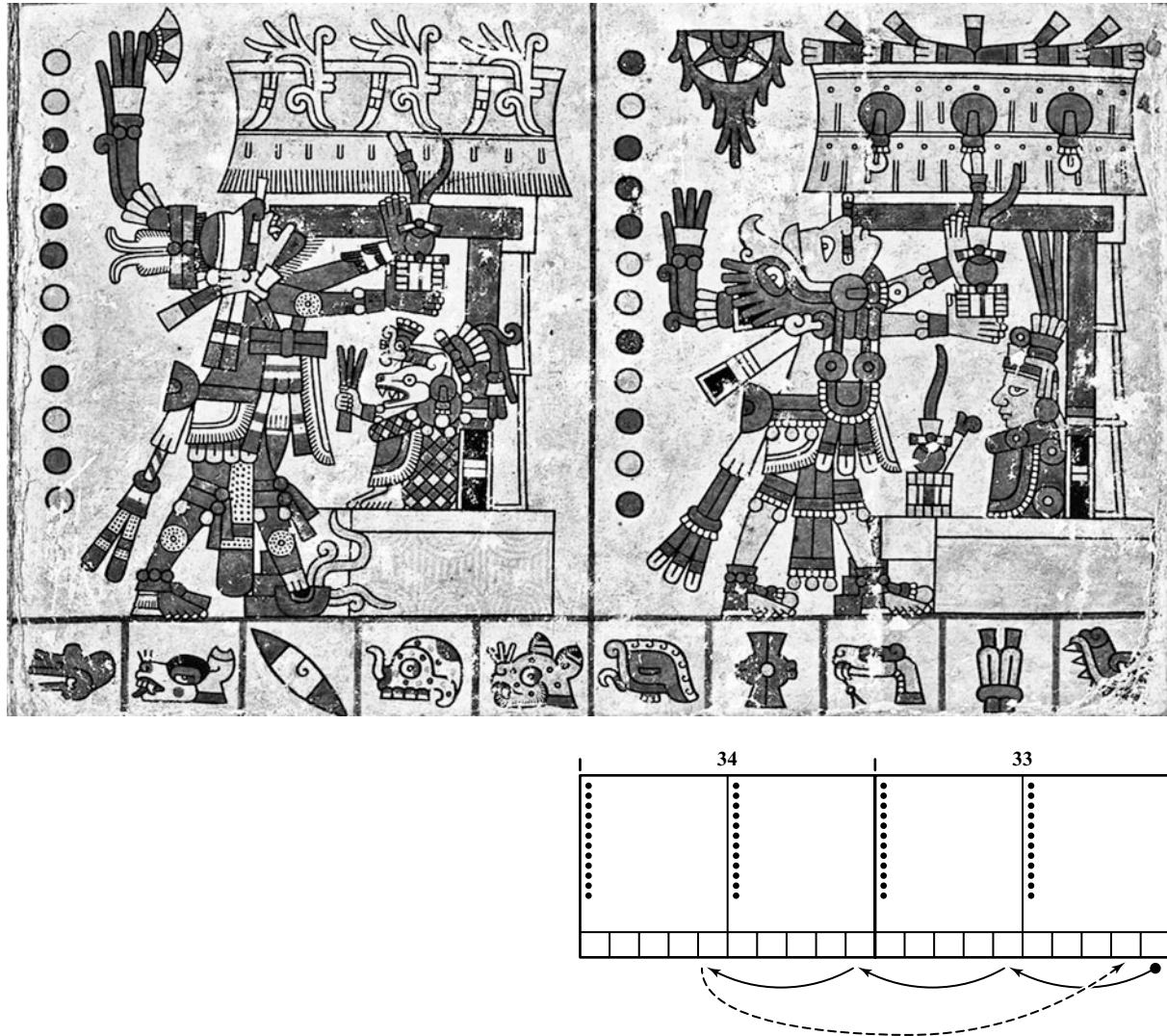


Fig. 42. The twenty *trecenas* (each represented by its initial day sign and twelve spacers) associated with four scenes of supernaturals making offerings to their temples and cult images inside, presented as a compressed table. Fejérváry-Mayer 33b–34b. Photograph © National Museums Liverpool. Diagram by Markus Eberl.

side; the number (in red) above is the coefficient of these signs. To the right, the columns (*t'ols*) give two numbers, one in red and one in black. The red number is the coefficient of the first day of each subset, the equivalent of the signs below the second, third, and fourth scenes of Fejérváry-Mayer 33b–34b. In black are distance numbers, which function like Borgia Group spacers, except that central Mexican spacers represent the nonpictured signs, whereas the Maya distance

numbers record the pictured signs as well as those in between.

The Maya almanacs read from one *t'ol* (column) to the next according to the given distance numbers. For example, the almanac in Fig. 43 opens with 10 Kan (upper left), and the count progresses to the right in sets of thirteen to 10 [Caban], 10 [Oc], 10 [Akbal], and 10 Cib (the sign Cib appearing as the second day sign in the list on the left side). They pass through the *t'ols*

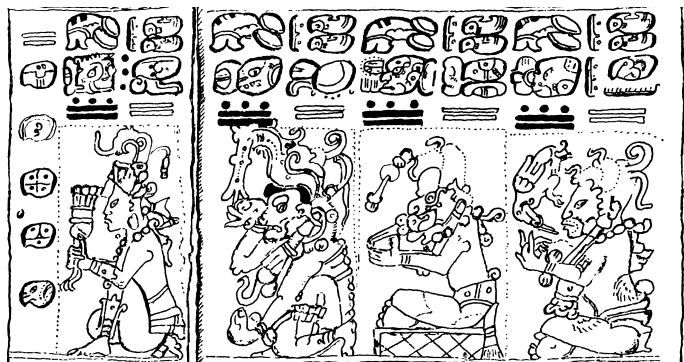


Fig. 43. A typical Maya almanac organized as a compressed table. Dresden 6b–7b (from Villacorta and Villacorta 1933).

any number of times, depending on whether they are 5×52 almanacs (five passes through fifty-two days), 10×26 (ten passes through twenty-six days), or some other combination equaling 260. In the same way, the compressed tabular almanacs of the Borgia Group read from cell to cell, passing through all the cells five times to structure a 5×52 almanac. One almanac and its cognate (Borgia 56, Vaticanus B 76; Fig. 62) require the reader to pass back and forth ten times, creating the only 10×26 almanac in the central Mexican corpus.

The compressed table almanacs, like their Maya counterparts, are much more internally cohesive than the almanacs arranged as lists. Whereas the listing almanacs read consecutively from one cell to the next, the compressed tables jump from cell to cell over and over again. In a rhythmic movement, the rotational progression of the count binds the cells together. Time literally moves through the cells (and through the different mantic associations) again and again within the same count. This structure unifies the 260-day period by presenting it as a set of interlocking and repeating cycles governed by the forces of return and repetition. This repetition is part of the system of correspondences the almanacs record.

Diagram

The third basic structure for almanacs is the diagram. Diagrammatic almanacs are organized with respect to a form or image that expresses a conceptual understand-

ing, and the day signs or other temporal units are then located on or around this image. Most diagrammatic almanacs (Fejérváry-Mayer 1 is an exception) do not link consecutive days or signs together as a formal sequence; instead, they usually separate the signs from each other and disperse them over the image. If the reader follows the progression of the day count, the signs form a track that jumps from one part or zone of the image to another. In such diagrammatic almanacs, the cells and grids outlined by red lines are usually absent, which means that the principles of inclusion and exclusion that operate with lists and tables are not fully in play. Instead of using red lines that unite and separate elements, space functions actively to associate or disassociate the various components. Location, proximity, and relative position become important.

On Borgia 53, the twenty day signs are distributed over the body of a deerskin, of the kind used in divination (Fig. 44).²² The deerskin is splayed out, and the deer's mouth is opened wide to reveal an anthropomorphic face; over it lies the frontal mask of Macuixochitl or Five Flower, a god of dance and song who also has solar associations. The day signs begin in the lower right with Crocodile below the deer's foot, and their progression zigzags back and forth up the deerskin. The second sign (Wind) is below the other foot on the left, then House on the loincloth between the two legs, to the left with Lizard at the penis, and to the right with Serpent at the deer's tail. From there the count moves into the abdomen, where a curved panel represents the animal's innards with the day signs Death, Deer, Rabbit, Water, and Dog, followed by Monkey at the navel. Then the succession rises to the upper limbs, with Grass on the left and Reed on the right, to Jaguar beside the supernatural face, to Eagle on the other side, then to Vulture at one antler and Motion at the other antler, down to Flint at the eye, to Rain (signified by the rain god's staff) at the other eye, and finally to Flower at the mouth, no doubt signaling flowery speech, or precious, sacred utterance.

Many of these associations between day signs and body parts are commonly seen in the almanacs and make perfect sense even to modern readers. The Crocodile earth monster is usually at the foot, for example, where it should be. The Serpent visually fits the tail very well, and House (with its domestic associations)

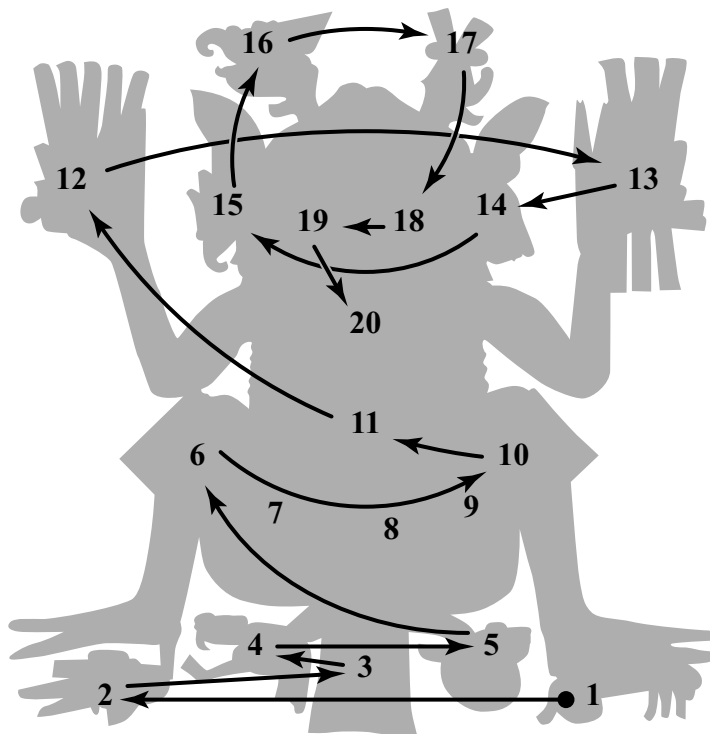


Fig. 44. The twenty day signs arranged over a splayed deerskin, as a diagrammatic presentation, Borgia 53a. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.

is often linked to the loincloth. The Lizard, a sign of prosperity but also adultery, is usually associated with the penis.²³ And what better day sign for the tongue than the Flower of eloquent speech?

The succession of the day signs creates an active circuit that cuts back and forth across the body. The circuit sets up a left-right rhythm that juxtaposes the right and the left and thereby establishes pairings and center points. For example, Crocodile and Wind are conceptually paired at the hooves of the hind legs, along with Grass and Reed at the hooves of the forelegs. House, Monkey, and Flower define the center line; and Death, Deer, Rabbit, Water, and Dog share the bowels. These kinds of differential groupings are easily achieved with diagrams, where there is great flexibility to locate a sign purely according to its mantic properties. This is not possible in lists and tables, which are limited by their linear structures.

Diagrammatic structures characterize about a third of all the existing almanacs. Several of these diagrams, however, also share features with lists and compressed tables. The cosmic diagram on Fejerváry-Mayer 1 (Fig. 65, Plate 6, discussed in Chapter 5) presents a list of day signs that winds sequentially around the principal imagery, creating a continuous sequence of the 260 days. The almanac that pairs Quetzalcoatl and Mictlantecuhli on Borgia 56 (Fig. 62) marries the diagram and compressed table. It relies on the left-right polarity of a diagram to assign the mantic meaning, but it uses the first day signs of the *trecenas* (accompanied by twelve spacers above and below) rather than just the day signs themselves; the 260-day count cycles through the almanac like a compressed table. Composite almanacs such as these productively employ the graphic advantages of different organizational structures.

These kinds of visual presentations—the list, the table, and the diagram—use space in different ways to achieve meaning. They also rely differentially on the principles of inclusion and exclusion and adjacency, proximity, and distance.

The list links specific calendrical units with individual images either by including the calendrical units in the same cell with the mantic images or by locating them in adjacent and clearly attached cells. Inclusion and adjacency create clear linkages between calendrical units and their mantic images, so there is no doubt

which image pertains to which day sign or number. Space and relative position are not issues. The calendrical units are linked only to those that come before and after and to each other as participants in a previously established sequence (the sequence of the day signs or the day numbers).

The fully elaborated table that constitutes the *in extenso* almanac relies on these same principles of inclusion and adjacency to associate its calendrical units and mantic images, but this tabular almanac uses space actively and brings the day signs into active association with each other. It is not simply that the day signs take meaning from the mantic scenes above and below but that the stacked rows create columns of day signs that share the same meaning. The day signs therefore figure within larger groupings from which they derive additional meaning. For example, a day sign is not merely associated with the mantic scenes above and below but also participates in a column of five day signs that share this meaning, and it is part of a horizontal row of fifty-two day signs. Additionally, its location within the two-page spread links it to other day signs located similarly on their two-page spreads. Relative position with respect to the horizontal and vertical axes, therefore, matters.

In diagrammatic almanacs, space or (more specifically) proximity is paramount. A calendrical unit takes meaning according to its location vis-à-vis a mantic image. The day signs are individually placed on or around the images without much regard for their usual sequence; rather than simply following the day signs that come before them in the sequence, they are instead put into association with specific parts of the image. This then links them to the day signs that share similar locations on the image; the day signs on the deer's four feet, or the bowel grouping, for example, share mantic properties. Inclusion and exclusion are not usually issues, and sequence and adjacency are suppressed. The most active force is spatial location or placement with respect to the image. Sequence comes into play when lists and grouped tables are combined with diagrams to create routes through the mantic field.

These structural formats—the list, table, and diagram—impart their own nuances and layers of meaning to the almanacs, which go beyond the simple link between a calendrical unit and a mantic image. They tell of separation, difference, and disjunction and of in-

clusion, commonality, and continuity; they establish or suggest further connections between the calendrical units and mantic images. They enrich the interpretations at the same time that they shape them. By displaying the individual elements within a consciously structured arrangement, the almanacs reveal to the diviner

a multitude of relationships and associations that he or she must take into consideration in drawing out the most appropriate reading for the situation. The Aztec almanacs codify knowledge by depicting the structures of cosmic and social reality.

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The Almanacs

The divinatory codices are not characterized by the narrative unity found in the historical codices, where one (or, at most, a few) long flowing set of ideas and events carries the reader along. Instead, their prophetic messages are parceled into many discrete and relatively independent units, the almanacs. Although it is convenient for us to number the almanacs sequentially, as I do in the Appendix, they were not meant to be read strictly in sequence, from one to the next, but were sought and consulted according to their pertinence to the divinatory situation.¹ The diviner might begin with the first almanac, then read the second, skip to the seventh, and end with the thirteenth, for example.

Most of the extant divinatory codices that are complete do have definite beginnings, however, and usually end with emphasis. Generally the beginning almanacs treat the entire 260-day cycle with some elaboration. The ending almanacs, for their part, serve to wrap things up succinctly. Usually the beginning and ending almanacs, being thematically neutral, are broadly applicable to many situations. Some codices, like the Borgia, have only one starting point; but others, like the Vaticanus B, have an obverse beginning and a reverse beginning, and it may not matter which is sought first. The Laud stands out because, although it physically appears to be complete, it lacks an emphatic, neu-

tral beginning and a neutral ending.² The longest surviving manuscripts, the Borgia and Vaticanus B, and to some extent the Fejérváry-Mayer and Cospi, establish the pattern of distinctive beginnings and endings.

Within the books, each almanac is fully self-contained as an independent presentation. Each has its own particular graphic structure, internal organization, reading order, scale, calendrical count, and content; adjacent almanacs do not often parallel each other in terms of structure or content (see the Appendix diagrams). Each almanac almost always stands as a complete, autonomous entity. Usually they begin at a page break and end on one. They often run for several pages along only one register or span upper and lower registers, beginning and ending according to their internal requirements.

An association or a relational tension, however, does exist between many adjacent almanacs, which varies in character. Although it may initially appear that almanacs in a codex are haphazardly arranged, this is probably an illusion born of our ignorance of the canons governing the divinatory codices. Several factors work together to determine almanac placement: complementarity, thematic emphasis, and physical fit. Some adjacent almanacs go well together because they offer complementary information that a diviner might need

to assemble a prognostication. For example, the Borgia opens with the *in extenso* almanac then follows with the twenty patrons of the day signs (pp. 9–13) and the nine Lords of the Night (p. 14). These are all general-purpose almanacs. Their grouping allows the diviner first to locate a day within the full 260-day count (noting its register and the auguries of its column), next to read the divine forces of its individual day sign, and then to note the Night Lord who also governed. The diviner would use these combined factors to construct the fate.

Occasionally almanacs cluster thematically. Two adjacent almanacs in the Borgia (27–28; Figs. 87, 88, Plate 8), for example, share the same graphic structure and both pertain to the rain gods and the growth of corn, although they differ calendrically. Several contiguous almanacs (twenty-day counts) in the Fejérváry-Mayer (30a–32a, 35a–40a) pertain to travelers (Fig. 85). In many cases, however, there is no clear contextual or associative reason for an almanac's placement. Location may then be merely a question of fit. The almanacs are side by side because one happens to fit in the space left over by the others. The one-panel deerskin almanac in the Borgia (Fig. 44), for example, neatly occupies the awkward left-over space created by the five-cell Venus almanac (see Fig. 89 and Appendix diagram).

Some almanacs are more likely than others to fall at the beginning or end of a codex. Three of the books open with the great *in extenso* almanac (discussed in Chapter 4), which presents all 260 days over an eight-page span (Borgia, Cospi, Vaticanus B). The canonical location of these almanacs is clearly at the beginning of a divinatory book, and they all read from the outside in. The Borgia then follows this with the twenty patrons of the day signs and the nine Lords of the Night. The standard Aztec codices present only one almanac, the fully elaborated *tonalpohualli*, divided into *trecenas* with *trecena* patrons. The Vaticanus B, which opens its obverse with the *in extenso* presentation, opens its reverse with the *tonalpohualli* in *trecenas* (as discussed below). Several codices open or close with diagrammatic presentations. The Fejérváry-Mayer opens with the 260 days inscribing a formée cross, usually misidentified as a Maltese cross (Fig. 65, Plate 6) and closes with the *trecenas* (represented by their beginning day signs and twelve spacers) arranged around Tezcatlipoca. The Vaticanus B closes with a diagrammatic deerskin al-

manac; and the Tudela, a cultural encyclopedia, has such a deerskin almanac on its last page (Figs. 59, 60, Plate 5).

A great many, probably most, of the almanacs are general purpose. They impartially present the forces governing the calendrical units or show how the units pertain to different elements, without tailoring the information to one realm of life or another. The largest almanacs—the *in extenso* almanac and the *tonalpohualli* in *trecenas*—have this character. So do the almanacs that present the nine Lords of the Night, the twenty patrons of the day signs, and the arrangements of the twenty days around a deerskin. All seem broadly applicable to the range of divinatory situations. Other almanacs, however, focus on one realm of social life or another. Some inform specifically about the fates of married couples or describe the process of childbirth; others pertain to travel, rain and agriculture, or the cyclic appearance of Venus. Directional almanacs, which assign the days or *trecenas* to the four or five directions, have features of both kinds; they contain much information relevant to broad areas of life, but their imagery can also target specific topics of concern.

Seeking Interpretive Readings

One of the great difficulties in understanding the divinatory codices is interpreting the imagery correctly and drawing prognostications from it. Seler's pioneering approach was to identify each part and read it iconographically, associating it with other examples elsewhere; but he did not usually then attempt to reach a synthetic meaning or draw a specific prognostication from the combined elements. When Seler did apply overarching interpretive paradigms to the almanacs, his results were usually not successful. Nowotny (1961) likewise did not seek prognostications, because he was interested instead in the calendrical structure of the almanacs. Although he generally followed Seler's iconographic identifications, he consciously withdrew from what he saw as Seler's overinterpretation. Most scholarship has concentrated on identifying the supernatural and other visual elements and interpreting the mantic presentation, although often not with an eye toward specific prognostication. More recently, Anders, Jansen, and the other co-authors of the 1990s commentaries to the Borbonicus and the Borgia Group

codices set the goal to do both. Consequently their suggested readings for the almanacs identify and describe the imagery and then advance a specific prognostication for the unit. Their identifications usually follow Seler, but with updates and revisions according to subsequent scholarship and their own understandings. Their prognostications come partially from the imagery and partially from the texts of the chroniclers, although without specific reference to individual sources.

A reading is best approached by first gathering and comparing the separate versions, or cognates, of the same almanac that appear in different codices. Such a comparison allows us to see in one version an aspect that might otherwise be overlooked in another. A seemingly insignificant feature in one almanac may appear in them all, which suggests that it stands as an essential element. Or the same feature may appear in modified form in different versions. Such parallel but slightly varied expressions of similar concepts can help define the more precise and correct meaning. Because multiple versions make for iconographically rich comparisons, the greatest interpretative success has been achieved with those almanacs that exist in multiple cognates. The almanac type that presents the *tonalpohualli* organized in *trecenas*, which is found in most of the extant religious books, is the best understood of all. It is also the almanac type best described by the chroniclers.

After an iconographic comparison of the visual elements has been achieved, we can look to the alphabetic texts for insights. Here the textual descriptions of almanacs and fates written down by the chroniclers become important. These discussions pertain largely to the *tonalpohualli* arranged in twenty *trecenas* or to one of the series of lords and patrons. The most important of these divinatory texts are by the annotators of the Borbonicus, Telleriano-Remensis, and Tudela, as well as Bernardino de Sahagún, Diego Durán, and Jacinto de la Serna.

Information from the Chroniclers

In the Borbonicus *tonalamatl*, two anonymous scribes added short glosses to the imagery. One named and numbered all the day signs and numbered the *trecenas* (e.g., “fourth month,” “first day Flower,” Fig. 46, Plate 1). The other added a brief note to each *trecena*

panel about the fate of those born during that period. These glosses give the merest indication of a fate (whether a person would be rich, brave, poor, a drunkard, etc.: e.g., “Those born under this sign will be singers”).

In contrast to these meager Borbonicus glosses, the three annotators of the almanac in the Telleriano-Remensis filled most of their pages with Spanish glosses and short texts (Fig. 48). They identify almost all the supernaturals who figure in that almanac and usually characterize the deities, tell of their realms and influences, and offer one or more prognostications. Often the annotators note parallels that they see between the Aztec supernaturals and biblical figures. Pedro de los Ríos, the third annotator, usually was the most descriptive and explanatory; he also assigned a fate—in terms of good, bad, and indifferent—to the nine Lords of the Night (Quiñones Keber 1995:125–126, 161). Where the Telleriano-Remensis is missing pages, the more ample Italian text in the Vaticanus A/Ríos provides an embellished and more Europeanized version. These glosses in the Telleriano-Remensis and the expanded text in the Vaticanus A/Ríos remain our major textual source for understanding the *trecenas*, their patrons, and the Lords of the Night.

The Tudela annotator glossed the two almanacs in that codex, neither of which is the *tonalpohualli* in *trecenas*. One is related to Borgia 75–76 (discussed below under directional almanacs); for this, the annotator named the day names, Night Lords, and Volatiles (he is the only sixteenth-century writer to name the Volatiles, and he indicated the names that newborns were likely to take: 90r–124r) (Figs. 54, 66, Plate 3). He then explained what offerings should be made to what deity when a person was ill. For each period, he identified the governing deities and the directional trees. Francisco Cervantes de Salazar (1971, 1:143–144) partially described a similar almanac. The second Tudela (124v–125r) almanac is a diagrammatic presentation of the twenty day signs around a deerskin (Fig. 60), like those in the Borgia (53) and Vaticanus B (96); here the annotator described the auguries of the day signs according to their locations.

Second in importance to the glosses in the Telleriano-Remensis are Sahagún’s descriptions of the *tonalpohualli* in *trecenas*, included in his *Primeros memoriales* and Florentine Codex. These constitute two different

explanations, the first (*Primeros memoriales*) written in Tepeapulco and the second (Florentine Codex) in Tlatelolco. For both, Sahagún was loosely explaining an almanac structured like that in the Borbonicus and Telleriano-Remensis, with the 260-day cycle organized in twenty *trecenas*. For both, however, he made no mention of *trecena* patrons or the visual imagery that would signal the fate; instead he concentrated on the first day of each *trecena*, saying that the following twelve days share its fate. He characterized the days as being good, adverse, and adverse but “somewhat good” and then described the particular influences that make up this characterization.³ His *Primeros memoriales* count begins for unknown reasons on 1 Dog (which begins the fourteenth *trecena*).

The *Primeros memoriales* explanation served as a template for the final *tonalpohualli* in Book 4 of his Florentine Codex. Both versions say that the first day of each *trecena* influences those that follow; both characterize the first day in terms of good, bad, and variable; and both then explain the prognostications in more detail. The two versions differ otherwise, however. The Florentine *tonalpohualli* begins with 1 Crocodile, as do other counts; for seven *trecenas*, Sahagún recorded varying fates for all or nearly all the individual days.⁴ As Charles Dibble (1984) has pointed out, these individual fates (positive and negative) are related not to the *trecena* as a whole or to its first day but to the coefficient or position of the day within the *trecena* (e.g., whether it is the second, the third day, or the ninth day). The seventh day is always positive, and the ninth day is almost always negative, for example. Because these fates parallel the Day Lords and Volatiles in the pictorial codices (which are also tied to these positions), Sahagún was essentially giving auguries associated secondarily with these lords or Volatiles, although he did not mention them by name. Both here in Book 4 on the divinatory calendar and in Book 2 on ceremonies (ch. 19:35–41), Sahagún also described the “movable feasts” attached to fourteen of the day names. Most of these are the first days of *trecenas*, but five (4 Movement, 7 Flower, 2 Rabbit, 4 Wind, and 2 Reed) are particular days within *trecenas*.

Diego Durán (1971:399–404) described not a *tonalpohualli* in *trecenas* but a simple list of the twenty day signs in their sequential order. Like Sahagún, he characterized the signs as being good, bad, and neutral

(participating in both good and evil). When he actually described the signs, however, his auguries became richer, more nuanced, and directly related to the qualities of the sign. For example, those born under the sign House, which he called a good sign, would be “inclined toward seclusion and a cloistered life, peaceable, calm, respectful of their parents, beloved by their kinsmen, disinclined to roaming and to long journeys. They were to die peacefully and in bed” (Durán 1971:400). Death was “an evil one, melancholy and sad”; under Deer were born “woodsmen, fond of the forest and hunting,” or those “desirous of visiting strange lands”; those born under the evil sign Wind “were to be fickle, inconsistent, negligent, lazy, . . . gluttons, parasites, rovers who have neither roots nor rest.” In almost all cases, Durán derived his prognostication from the qualities of the sign itself, not from its day sign patron or *trecena* patron as illustrated in the pictorials.

Writing a half-century later, the seventeenth-century priest Jacinto de la Serna also included brief auguries in his description of the divinatory calendar, but his explanations are informationally poorer and more problematic. Most of the auguries that he provides differ from those recorded by his earlier colleagues. He listed the nine Lords of the Night, characterizing them as very good, good, and bad, in a pattern different from the one that Ríos follows in the Telleriano-Remensis (Serna 1953:163–165).⁵ He also characterized the twenty day signs as being very good, good, praiseworthy, indifferent, and bad, in a pattern different from that of Durán, but did not add reasons for his assessments (Serna 1953:148). For the *tonalpohualli* in *trecenas*, he briefly described fates for many of the first *trecena* days and for other days within, such as 2 Rabbit or 5 Dog, referring to the associated deities (pp. 122–125); only a few of these gods coincide with those in the pictorial codices. Serna (1953:173–180) also described a series of movable feasts, in a section that seems to have been derived from Sahagún’s (1953–1982, bk. 2:35–41) description; but because he failed to indicate the days on which the feasts were celebrated, we must reconstruct these dates by using the parallel Sahagún text.

Several of these authors characterize the days in terms of good, bad, and indifferent or variable. We must not automatically assume, however, that this was an indigenous categorization, for almanac fates in Europe were also manifested in these terms. Most of

the authors who use these terms differ from other authors in their assignments. A day that Sahagún describes as good may be bad in Durán's eyes. This variance arises because their descriptions are probably based on different almanac presentations, and they were considering different aspects in reaching a determination. Barbara Tedlock (1982:98–99, 127, 175) has found that contemporary diviners in highland Guatemala do not consistently designate some days as bad and others as good. Asked to separate the days in this fashion, they contradicted each other and themselves: although some days may have more negative forces than others, no day is uniformly negative or positive. For the Aztecs and their neighbors, the days themselves were not intrinsically good or bad but were a combination of positive and negative features; a day with forces propitious for one activity might be less helpful for a different task.⁶ As the Tudela annotator says about the oratorical skills associated with the parrot augury (discussed below), some aspects are good and others not.

The sixteenth- and seventeenth-century authors describe only a few of the many kinds of almanacs. The annotators of the Borbonicus and Telleriano-Remensis were clearly describing the *tonalpohualli* organized into *treceñas*. Sahagún was also explaining such a *tonalpohualli* in his *Primeros memoriales* and Codex Florentine, although his explanations seem to fit a listing of the twenty day signs better than a listing of the *treceñas*, and his descriptions of individual days in essence provide auguries for the thirteen coefficients. Durán and Serna both explain the simple list of twenty day signs in sequence. The Telleriano-Remensis annotator and Serna characterize the nine Night Lords. The Tudela scribe describes the day signs on a deerskin, and he and Cervantes de Salazar explain a variant *tonalpohualli* organized directionally (Tudela de la Orden 1980:304–307; Cervantes de Salazar 1971, 1:143–144).

Additional textual aids to interpreting the almanacs come as occasional explanations of deities, feasts, omens, and other aspects of religious life that are sprinkled throughout the ethnohistorical record. Such explanations of deities, scenes, and almanacs can make it possible to interpret elements and features that might otherwise remain unclear. They provide other windows into the ancient conceptual and intellectual basis that created the almanacs. For those almanacs with multiple pictorial versions as well as relevant alpha-

betic texts, interpretation can be richer and less speculative. As the quantity of relevant data increases, so does the likelihood that a reading is the correct one. For most almanacs, which exist only in pictorial versions, we can draw on some of the alphabetic explanations if we recognize that they pertain most completely to other presentations.

Modern Usage

Another significant window into the almanacs comes through the study of contemporary religious practices among indigenous populations who have maintained traditional ways of thinking and doing. Nowotny (1961, 2005) pioneered this approach by drawing on the ethnographic work of Leonhard Schultze Jena (1933–1938) among the Nahuas and Tlapanecs in highland central and western Mexico. Since then scholars like Peter van der Loo, Maarten Jansen, Luis Reyes García, Alan Sandstrom, and Frank Lipp, who have intensively studied traditional indigenous practices, have found parallels and analogies relevant to the divinatory codices. These usually pertain less to individual auguries than to ritual practices and festivals and are therefore discussed more fully in Chapter 6, on the ritual protocols.

Scholars studying the corpus of divinatory codices, rather than individual almanacs, have followed different strategies for explaining the almanacs. Seler, in his commentaries on specific manuscripts, discussed each almanac sequentially according to its location in the manuscript, as do Anders, Jansen, and their co-authors of the 1990s commentaries. This is the natural way to approach a single source. Nowotny (1961, 2005), who analyzed the entire divinatory genre, took a calendrical approach and considered the almanacs strictly in terms of their calendrical structure. Having examined the almanacs' major structural features (see Chapter 4), I have chosen a thematic approach, which distinguishes multipurpose from topical almanacs and emphasizes parallel presentations in the different manuscripts. I first discuss the multipurpose almanacs—the *tonalpohualli* in *treceñas* and its embellishments, the twenty day sign patrons, and the deerskin almanacs. The *in extenso* almanac, which is equally multipurpose, is explained in Chapter 4. Then I consider the directional almanacs before looking at the most important of the topical alma-

nacs: those pertaining to marriage, infancy, travel, agriculture, and Venus.

Multipurpose Almanacs

Tonalpohualli in *Trecenas* with Patrons

The most important almanac—if we can judge importance by the frequency of appearance and by the amount of codex space devoted to it—is the presentation of the *tonalpohualli* as twenty *trecenas*, each with its patron and mantic influences (Table 6). Five divinatory books contain it, and it occupies more space in these books than does any other almanac. The Aztec *tonalamatls*—Borbonicus, Tonalamatl Aubin, and Telleriano-Remensis—have only this kind of almanac and no other. The Borbonicus and Tonalamatl Aubin give a full page to each *trecena*, presenting the count with full elaboration. The Telleriano-Remensis spreads each *trecena* over the verso and recto of facing pages, originally devoting forty pages to its presentation. The Borgia and Vaticanus B feature this almanac also, respectively devoting ten and twenty pages to it.

Structure The almanac appears in its most fully accoutered and elaborated form in the books of the Aztec world, notably the Codex Borbonicus and Tonalamatl Aubin, somewhat simplified in the Telleriano-Remensis. On each page a large cell contains the *trecena* patron(s) and mantic images that govern the entire thirteen-day period (Fig. 45). Running sequentially around the cell are the thirteen days, along with their individual influences presented in registers and columns. The day signs have their numerical coefficients 1 through 13. Closest physically to the days are the nine Lords of the Night, also listed sequentially, then the thirteen Day Lords, and finally the thirteen Volatiles. Each day is thus associated with a Night Lord, a Day Lord, and a Volatile, in addition to the shared *trecena* images. The Borbonicus reads from left to right, bottom to top, and the Tonalamatl Aubin reads from top to bottom, right to left.

For the fourth *trecena* (Fig. 46, Plate 1), for example, the Borbonicus days read from left to right in the lowermost register (1 Flower through 7 Death) and then read vertically from bottom to top in the column next to the main cell (8 Deer through 13 Grass).

Next to each day within the same cell is one of the Night Lords, whose open arms visually embrace the day. In this *trecena*, the Night Lords begin with Centeotl (Maize Cob Lord). The adjacent cell above it contains the relevant Day Lord and Volatile. Because there are thirteen Day Lords and Volatiles, these gods and flying creatures are implicitly linked to the coefficients 1 through 13 and maintain their same positions from *trecena* to *trecena*, while the Night Lords and the day signs change.

The Tonalamatl Aubin arranges the days and their influences similarly but puts each component in its own cell (Fig. 47). The days begin in the far upper right with 1 Flower and read halfway down the right side of the page to 4 House; the Night Lords, Day Lords, and Volatiles (here with deity heads in their open beaks) are in cells to the left.⁷ Then the days pick up again in the lower right corner with 5 Lizard and read from right to left to 13 Grass; their Night Lords, Day Lords, and Volatiles are stacked above. In the Telleriano-Remensis (Fig. 48), each *trecena* spans facing (verso-recto) pages of the European-paper book, and only the Night Lords accompany the days around the *trecena* patrons; the days and Night Lords read from left to right.

In the Borgia and Vaticanus B versions, the *trecena* panels are flanked only by the day signs (Figs. 45, 49, 50). Day numbers, Night Lords, Day Lords, and Volatiles are absent, although the Night Lords and Volatiles are elsewhere presented in their own respective almanacs. Here lies one of the great differences between the Aztec and Borgia Group almanacs. Whereas the Aztec books present the *trecena* series in its full elaboration, including the several series of lords, the Borgia Group codices present only the day signs and *trecena* patrons. They relegate the other influences to separate almanacs, as discussed below.

Mantic Imagery Iconographically, the Aztec and Borgia Group presentations also cluster distinctly. Although all the manuscripts seem to create the same general prognostications for each *trecena*, the visual elements in the mantic fields of the Aztec codices are very similar to each other and often diverge from the Borgia and Vaticanus B, which are themselves close. The fourth *trecena*, for example, is presided over by Huehucoyotl (Old Coyote), a deity associated with song and dance, oratory, and deceit as well as sexuality

					13	NL	DL	V					
					12	NL	DL	V					
					11	NL	DL	V					
					10	NL	DL	V					
					9	NL	DL	V					
					8	NL	DL	V					
V DL		V DL		V DL		V DL		V DL		V DL			
1	NL	2	NL	3	NL	4	NL	5	NL	6	NL	7	NL

					V	DL	NL	1
					V	DL	NL	2
					V	DL	NL	3
					V	DL	NL	4
V	V	V	V	V	V	V	V	V
DL	DL	DL	DL	DL	DL	DL	DL	DL
NL	NL	NL	NL	NL	NL	NL	NL	NL
13	12	11	10	9	8	7	6	5

NL	NL	NL	NL	NL
1	2	3	4	5

NL	NL	NL	NL	NL
6	7	8	9	10
			NL	11
			NL	12
			NL	13

DS	DS	DS	DS	DS	DS	DS
						DS
						DS
						DS
						DS
						DS

[illegible]

Fig. 45. Structure of the *treccena* almanacs in the Borbonicus, Tonalamatl Aubin, Telleriano-Remensis (and Vaticanus A/Ríos), Vaticanus B, and Borgia. Diagrams by Markus Eberl.

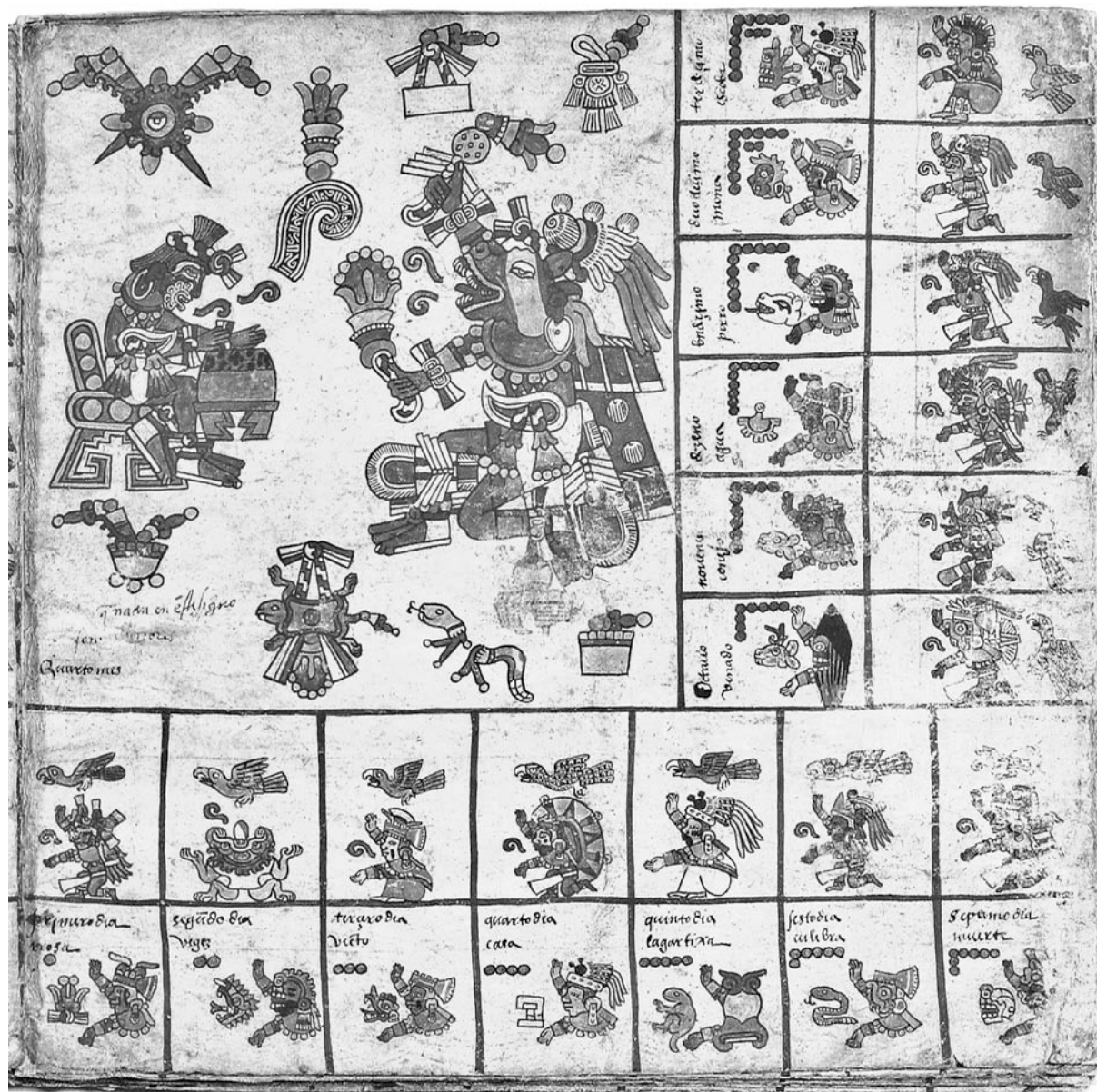


Fig. 46. *Trecena 4*, Codex Borbonicus 4. © Assemblée Nationale, Paris.

(Figs. 46–50).⁸ All codices emphasize the festive nature of the prognostication, but each highlights different aspects. The Borbonicus and Tonalamatl Aubin, which are iconographically most similar, emphasize the musical (Figs. 46, 47), the Borgia and Vaticanus B feature dance (Figs. 49, 50), and all but the Borbonicus include a symbolically rich female who represents debauchery. Individual Aztec manuscripts also share specific elements with individual Borgia Group manuscripts that

they do not share with each other, however, so the iconographic divide between Aztec and the Borgia Group presentations is spanned by a number of separate connections.

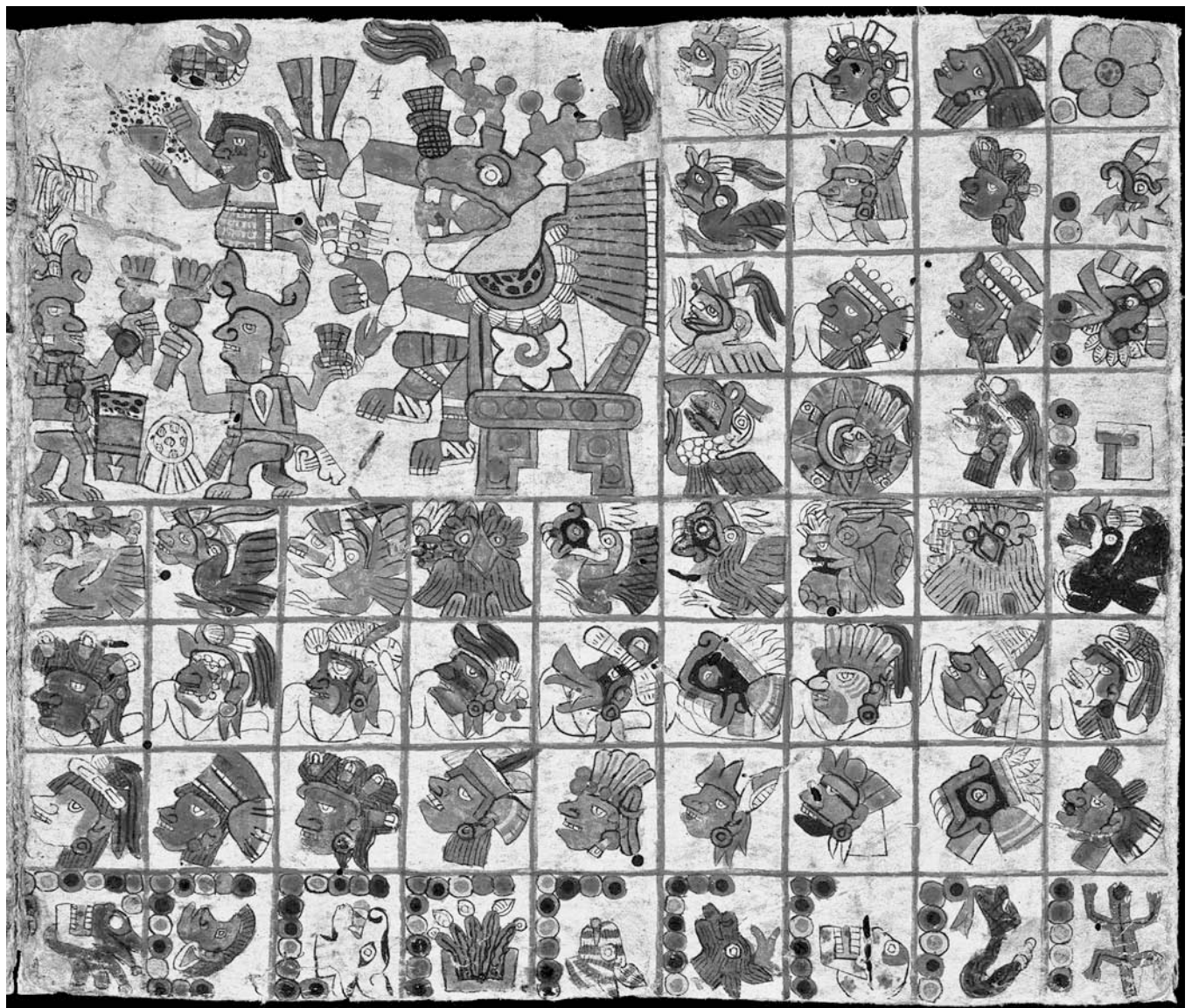
In most examples, Huehuecoyotl wears a necklace of pointed shells and a distinctive shell pendant of a pointed oval, costuming usually associated with gods of dance and feasting. He poses in the pinwheel stance with arms outstretched in front, characteristic of so

many *trecena* patrons. The Aztec codices have him painted red and holding musical instruments or penitential implements: in the Borbonicus, a round gourd rattle and flowered baton; in the Telleriano-Remensis, the same gourd rattle, a red strip punctuated with white ties, and a human forearm; in the Tonalamatl Aubin, the same red strip and maguey spines. Huehuecoyotl remains empty handed in the Borgia and Vaticanus B.

Opposite Huehuecoyotl in the Borbonicus, a musician with the body paint and costume of Ixtlilton

plays the kettle drum and sings. Ixtlilton is a god of drink and feasting, who is also associated with the oratory and scribal arts. As a healer and diviner, his bowl of deep black water healed children and revealed adulterers and thieves.⁹ Ixtlilton wears Huehuecoyotl's pointed oval pectoral and ear ornament and has a white five-fingered band around his mouth. Both are elements characteristic of Macuilxochitl, lord of song, dance, and gaming and a "god of the palace folk," who visits venereal disease on the lustful.¹⁰ Indeed, Ixtlil-

Fig. 47. *Trecena* 4, Tonalamatl Aubin 4. Photograph courtesy of the Bibliothèque Nationale, Paris.



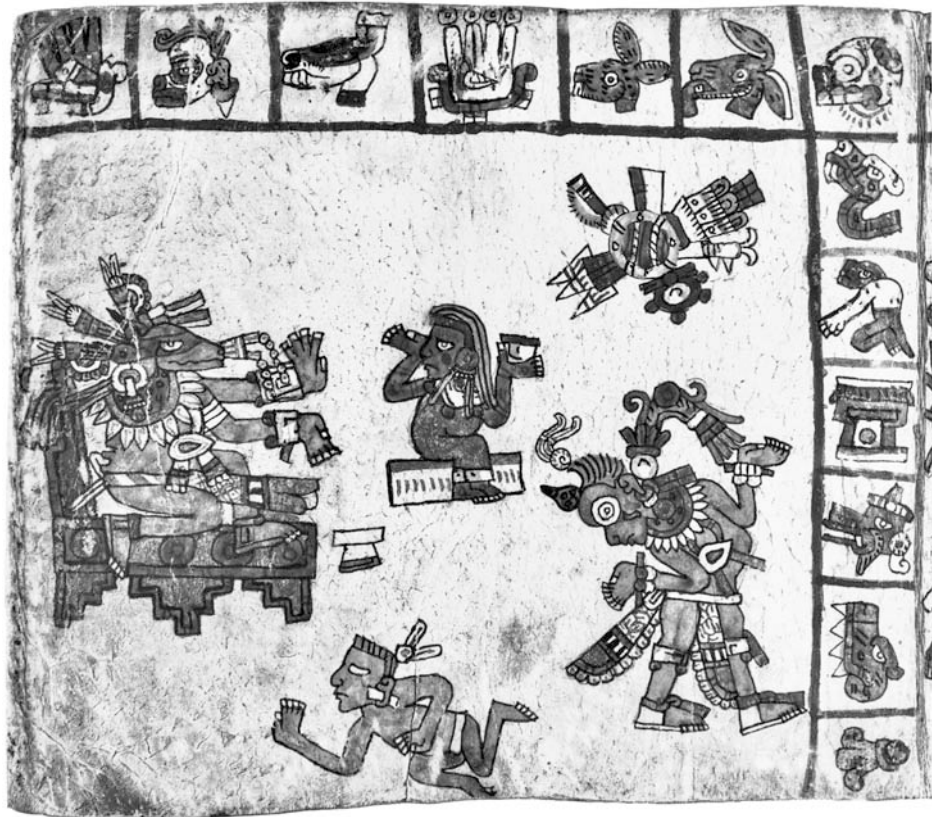
ton and Huehuecoyotl are both among the deities who share iconographic elements and cultural realms with Macuilmochitl. In the Borbonicus, Ixtlilton emits a magnificent speech scroll embellished with *ilhuitl* symbols (which look like percent signs) that signal sacred speech or song;¹¹ Huehuecoyotl also sings. In the Tonalamatl Aubin, two musicians play: both shake gourd rattles, while one beats the kettle drum and the other holds up a tortoise-shell drum. Where these Aztec manuscripts feature musicians, the Borgia and Vaticanus B feature a similarly costumed dancer, round-eyed with a jaguar or coyote (?) ear in addition to his human one, body twisted, and arms posed angularly; he sings in the Borgia.

Luis Reyes García (1997) has pointed out that manically loaded elements can appear in various contexts in the *trecena* panels and still carry the same meaning: they can stand as independent symbols, be combined with other images, or be manipulated by the actors in the scene. We see this here. In the Borbonicus and To-

nalamatl Aubin, tortoise shell drums either float unattended or are played, maguey spines flank the symbol for night or are held by Huehuecoyotl, and incense pouches figure symbolically. A throne appears in all the scenes, under Huehuecoyotl, the drummer, or the female. The symbol for night is present in the Borbonicus and Borgia, and the *ilhuitl* symbol qualifies the speech scroll in the Borbonicus as well as Huehuecoyotl's sandals in the Tonalamatl Aubin.

All of the manuscripts except the Borbonicus feature the same long-haired female who kneels or sits. Her bad character is defined by her posture, costume, and what she carries. Her twisted torso, backward-facing head, and outstretched hands at her forehead mark her as a wanton woman; her breasts are intentionally exposed in the Borgia and Telleriano-Remensis. And if this were not sufficient indication, she holds a bowl of pulque in the Vaticanus B and Tonalamatl Aubin and a bowl of excrement in the Telleriano-Remensis. In the Telleriano-Remensis and Tonalamatl Aubin, her eyes

Fig. 50. *Trecena* 4, Codex Vaticanus B 52. Photograph © Biblioteca Apostolica Vaticana.



are filled with tears; and in the Borgia, she is in a ruined house or temple, its thatched roof askew. In the Borgia and Vaticanus B, a simply costumed falling figure reinforces the message of an individual falling from the correct and moral way; a combined symbol of shield, spears, obsidian club, and banner also conveys the idea of war or conflict, as does a white shield with a banner in the Tonalamatl Aubin.

Much can be understood just from the images themselves. This *trecena* invokes feasting—dancing, music, singing, and oratory—but it also involves a harlot, conflict, and a destroyed house or temple. The throne signals rulership or lordly status. The bloodletters and other implements indicate what kinds of sacrifices should be made, perhaps at night. For most almanacs the images are our only guide; but for these *trecena* panels, we are fortunate to have the annotators of the Telleriano-Remensis, who identified and interpreted the *trecena* elements, albeit through the lens of Christian concepts of sin and salvation and with desires for Old World parallels. Sahagún, in his Book 4 on divination, also summarized the prognostications for the days organized into *trecenas*. He relied on the first day of each *trecena*, rather than on the *trecena* patrons, to set the fate. His explanations usually concentrate only on this first day, but often his prognostications still fit the *trecena* imagery. *Trecena* 4, beginning on the day 1 Flower, is a good example.

Glossing the Telleriano-Remensis image, the second annotator describes Huehuecoyotl as one who speaks maliciously about others and sows discord among humans; he was responsible for creating discord with the Tepanecs, which led to war in the world. Although this statement was crossed out, we find confirmation of Huehuecoyotl's deceitful nature in an Aztec adage recorded by Sahagún (1953–1982, bk. 6:232) that clearly equates coyotes with liars: “Have I just become a coyote?” means “Have I told a lie?” Elsewhere Sahagún (1953–1982, bk. 5:6–7) describes the coyote as “cunning, astute, . . . quite as astute as a man.” He characterizes the animal as “in every way diabolical,” because it will take vengeance on humans, stealing their domestic animals or menacing them on the road, but, conversely, can also be “grateful and appreciative.” As an example, he records the story of a warrior who saved a coyote from a serpent, after which the coyote continually re-

paid the favor by bringing the man turkeys. As a omen, again according to Sahagún (1953–1982, bk. 5:180), the coyote is the disguise of Tezcatlipoca; when people see a coyote on the road, it means that something harmful, perhaps thieves or robbers, will spring out at them.

Pedro de los Ríos, the third Telleriano-Remensis annotator, describes Huehuecoyotl as both a mischief-maker and the deceived one, a god of the Otomis (Quiñones Keber 1995:259). For the tearful female who holds a bowl of excrement, Ríos seeks a supernatural identity and names her Ixnexthli (he says that she has ashes in her eyes because of her “sin”) and Xochiquetzal, a goddess of youthful fertility. Both choices potentially convey the sense of wantonness described so well pictorially. Drawing a biblical parallel, Ríos relates Huehuecoyotl to Adam and Ixnexthli to Eve, who “sinned” by picking flowers. He indicates that during every Rabbit year in this *trecena* they commemorate “the fall of the first man,” which reinforces the analogy to the expulsion from the Garden of Eden. At the end, Ríos offers the prognostication that those born in this week will be singers, doctors, weavers, and important persons (Quiñones Keber 1995:168–170, 259–260).

Sahagún (1953–1982, bk. 4:23–25) gives a roughly similar prognostication for those born on “the fourth [*trecena*] sign, named One Flower.” If a man, he “would become a singer, a bearer of joy, a teller of tales, an artisan,” one who “merited his consolation, his riches” and “lived content and happy” when “he did his penance well.” If a woman, “she would be an able embroiderer,” but only if she did penance, fasted, and drew blood on the day 1 Flower. Failure to perform the proper penance or, for the man, to be humble in his achievements meant ruin. The arrogant man would sicken horribly, lose his fortune, and live in misery. Sahagún describes this decline as a falling: “For, so it was said, he had fallen into great sin. . . . And there was the great flood, the great crag, the pit, where there was a falling into the flood, or from the crag, or into the pit.” The woman who failed in her penance “merited complete poverty and misery. . . . Her deserts came to an end, . . . they became corruption. She became a harlot, a courtesan. She sold herself; she became a paramour.”

With his characteristic brevity, the second annotator of the Borbonicus says that those born during this *trecena* will be singers.

In these annotations and in Sahagún's text we have the verbal equivalents of much of the imagery in the *trecena* panels. The singers and dancers signal artistic and linguistic accomplishment. Huehuecoyotl's presence evokes concepts of dance, song, deceit, and sexuality. Ixtlilton's appearance in the Borbonicus brings in concepts of feasting, healing, divination to identify theft and adultery, and oratorical skills. Floral embellishments to the offerings in the Borbonicus, as well as the thrones in all the scenes, may refer to success and merit. The thrones surely also refer to the "palace folk" of whom Macuilxochitl is a patron. The harlot and the man falling from the moral and correct order are specifically mentioned by the chroniclers; the ruined house or temple in the Borgia reinforces these notions. The shield-and-spears or shield-and-banner symbols point toward conflict or destruction, against which Sahagún and the Telleriano-Remensis annotators warn. Although the mantic imagery may yield the prognostication that those born then would be singers, musicians, artisans, creators of finely decorated cloth, doctors, and tellers of tales, the iconography also conveys the negative side of the fate, which cautions against liars, deception, trickery, discord, and the potential to fall into lustful, wanton ways. These forces govern all the days in this fourth *trecena*.

Complementary Series

In the fully elaborated *tonalpohualli* presentations of the Aztec world—Borbonicus and Tonalamatl Aubin—the individual *trecena* days are accompanied not just by the *trecena* patrons but also by three series of influences: the Night Lords, the Day Lords, and the Volatiles. In the Borgia Group, these series are absent, are enfolded into other presentations, or are presented separately.

Nine Lords of the Night The Night Lord series is clearly the most important of the three. It is the most frequently presented, and it is the one most often employed in the full *tonalpohualli* count. In the Borbonicus and Tonalamatl Aubin, these are the lords placed closest to the day names (in the Borbonicus they visually embrace the days); in the Telleriano-Remensis, they accompany the day names, and the Day Lords

and Volatiles are absent. The Night Lords also figure in the extended *tonalpohualli* almanac in the Tudela (98v–124r). This Tudela almanac lists all 260 days in four segments of sixty-five across a run of over forty pages; the Night Lords are the only series that accompanies the days throughout. The Night Lords additionally accompany the day signs in the *in extenso* almanac that opens the Cospi (1–8), where the successive Lords of the Night occupy the same cells as the sequent day signs. The opening almanac of the Fejérváry-Mayer, which tracks the 260 days around a formée cross, also features the nine Night Lords in the center and arms of the cross. Separate almanacs dedicated to the Night Lords appear in the Borgia (14), Fejérváry-Mayer (2–4), and Vaticanus B (19b–23b).

In all the Aztec codices (Borbonicus, Tonalamatl Aubin, Telleriano-Remensis, and Tudela) and in the Cospi, the Night Lords appear as heads or as heads with pectorals, shoulders, and outstretched arms (Fig. 51).¹² The representations are fairly standardized and uncomplicated, although the first lord, Xiuhtecuhtli, can either wear the pointed turquoise crown or have two arrow shafts rising from his fillet; the second lord, Itztli or Tecpatl, can be more or less knife-like; and the eighth lord, Tepeyollotl, usually has two bumps on his head, except in the Borbonicus and Cospi, where he is hill-like. In the Cospi, the Night Lords occasionally appear not as heads but as symbols evoking the deities: for example, a cluster of maize cobs for Centeotl, a long bone for Mictlantecuhtli, and an enigmatic symbol (perhaps a cotton ball) for Tlazolteotl.

The independent Night Lord almanacs in the Borgia, Fejérváry-Mayer, and Vaticanus B all show standing lords in distinctive situations, associated with the first nine days of the count (Figs. 52, 53). These are parallel presentations, where in nine cells the sequent Night Lords hold forth offerings and appear with specific symbols that reflect the influences they carry. These almanacs are all organized as simple lists. In the Borgia, the cells flow boustrophedon-style along three registers of a single page (14); in the Fejérváry-Mayer and Vaticanus B, the nine cells flow across multiple pages. In the Borgia and Vaticanus B, the lords hold a fagot and rubber ball; in the Fejérváry-Mayer, it is more likely a feathered baton and weapons. These are surely indications of the offerings and sacrifices to be made to

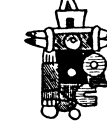
	Codex Borbonicus	Tonalamatl Aubin	Codex Telleriano-Remensis	Codex Cospi	Codex Cospi Abbreviations	
Xiuhtecuhltli						1
Itztli or Tecpatl						2
Piltzintecuhltli						3
Centeotl						4
Mictlantecuhltli						5
Chalchiuhtlicue						6
Tlazolteotl						7
Tepeyollotl						8
Tlaloc						9

Fig. 51. Nine Lords of the Night as represented in the Borbonicus, Tonalamatl Aubin, Telleriano-Remensis, Cospi, and abbreviated in Cospi (from Anders and Jansen 1988:68; reproduced with permission of Akademische Druck- u. Verlagsanstalt).



Fig. 52. Nine Lords of the Night. Codex Borgia 14. Photograph © Biblioteca Apostolica Vaticana.

these deities. Each lord also has his or her own symbolic elements that pertain to his or her realm and nature, which convey a prognostication. Temples of different kinds appear with three lords (Xiuhtecuhtli, Piltzintecuhtli, and Tepeyollotl), dire crossroads appear with three others (Itztli, Mictlantecuhtli, and Tlazoltéotl), bodies of water accompany the water deities Tlaloc and Chalchiuhtlicue, and a fat fleshy plant ap-

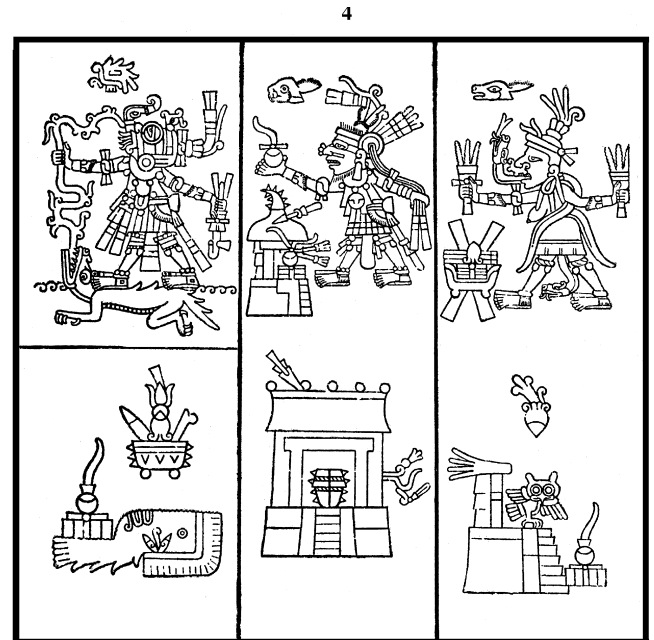
pears with the corn god Centeotl. Each scene also has individual features that add richness to the message, but the main elements state the essential fates associated with the lords.

We are fortunate once more to have confirmation, in an essentialized and unnuanced form, of the negative and positive influences of these lords, for Pedro de los Ríos jotted down the influences of the Night Lords in

the Telleriano-Remensis (Nowotny 1961:26, 2005:20). Next to each Night Lord, Ríos glossed a prognostication: good, bad, or indifferent. Those three lords he called *malo* or “bad” are accompanied by crossroads in the Borgia Group codices; the three he called *bueno* or “good” have temples, and the three he called *indiferente* or “indifferent” have bodies of water or the plant (Table 7). Here is a situation where colonial Aztec glosses effectively explain the imagery in Borgia Group almanacs and vice versa. This happy correspondence is relatively rare, however. Writing in the middle of the seventeenth century, Jacinto de la Serna (1953:163–164) recorded entirely different auguries for the Night Lords. Serna may have been drawing on another presentation, where the fates may have read differently.

Thirteen Volatiles and Thirteen Day Lords The thirteen flying creatures and the thirteen Lords of the Day contribute fates to the days according to their numerical coefficients. Both series appear along with the days in all the *trecenas* in the Borbonicus and Tonalamatl Aubin (Figs. 46, 47, Plate 1). They repeat in each *trecena* a different lord for each of the thirteen days, always in the same position and linked to the same day number (Table 4).

The thirteen Volatiles—twelve birds and the butterfly—are the more significant of the two series, judging by the frequency of their appearance. In addition to figuring in the Borbonicus and Tonalamatl Aubin, they accompany the days of the first *trecena* in the Tudela (Fig. 54, Plate 3). The Borgia devotes a separate almanac to them, where on a single page the Volatiles are unambiguously linked to the numerical coefficients 1 through 13 (Fig. 55, Plate 4). The Tudela annotator names the Volatiles and calls them auguries for their respective days (98v–99r; Tudela de la Orden 1980:309–311). He describes those born on 13 Reed, where the bird is a parrot, as being talkative, liars, knowledgeable, and with good memories; he acknowledges that some of these fates are good and others bad (94v; Tudela de la Orden 1980:304). With respect to the first bird, he says that those who see the bird on that day take it as an augury (presumably a negative one) and should turn back from a journey or stop work and make offerings to the Night Lord Xiuhtecuhtli (90r; Tudela de la Orden 1980:296).



The thirteen Day Lords create a lesser series (Table 4). Of the Aztec divinatory codices, only the Borbonicus and Tonalamatl Aubin contain this series of supernaturals (Figs. 46, 47); no Borgia Group almanac refers to them or includes them. Eduard Seler (1900–1901:26–31) coined the term “Lords of the Day” to describe them, for he saw them as paralleling the Lords of the Night and constructed their names largely from their iconography. Very little is known about them, because the chroniclers do not name or discuss them either, although the *Histoire du Mexique* (Gari-bay 1979:102–103) names thirteen similar lords who presided over the thirteen heavens. Like the Night Lords, they are additional forces that influence the days in turn.

Although Sahagún (1953–1982, bk. 4; Dibble 1984) mentions neither the Volatiles nor the Day Lords in his explanation of the divinatory calendar, he recognizes that a day’s numerical coefficient, and thus its placement in the *trecena*, affects its fate. According to his descriptions of the daily auguries, the first day takes the meaning of the day sign; but thereafter days 2, 4, 5, 6, 8, and 9 are usually negative, and days 3, 7, 10, 11, 12, and 13 are positive (Dibble 1984:121). Motolinia’s understanding of the numerical coefficients is slightly different. Writing about the ceremonies conducted in

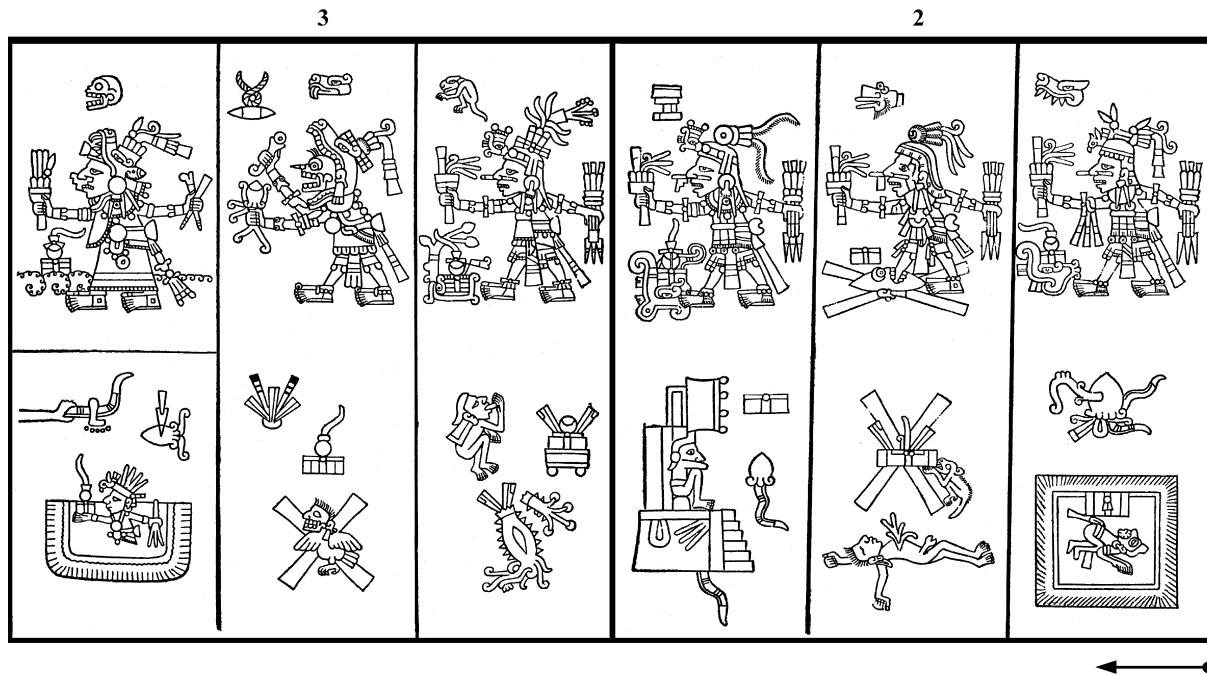


Fig. 53. Nine Lords of the Night. Codex Fejérváry-Mayer 2–4 (configured from Seler 1901–1902).

Table 7. THE NINE LORDS OF THE NIGHT AND THEIR FORCES (SELER 1900–1901 : 22)

NO.	LORD	SYMBOL	RÍOS GLOSS	SERNA
1	Xiuhtecuhtli (Turquoise [Year] Lord)	temple	good	bad
2	Itztli or Tecpatl (Obsidian or Flint)	crossroads	bad	bad
3	Piltzintecuhtli (Prince Lord, the sun)	temple	good	very good
4	Centeotl (Maize Cob Lord)	plant	indifferent	very good
5	Mictlantecuhtli (Death Lord)	crossroads	bad	good
6	Chalchiuhtlicue (Jade Her Skirt)	water	indifferent	very good
7	Tlazolteotl (Filth Goddess)	crossroads	bad	bad
8	Tepeyollotl (Hill Heart)	temple	good	good
9	Tlaloc (rain god)	water	indifferent	very good



Fig. 54. The first thirteen day signs of *trecena* 1, with their Volatiles and Night Lords. Codex Tudela 98v–99r. Courtesy of the Museo de América, Madrid.

Tlaxcala, Huejotzingo, and Cholula when a man was to receive the title of *tecuhltli* (lord), he says that the ceremony was timed according to the numerical coefficient of the day. Days with even-numbered coefficients (such as 4, 6, and 8) were considered bad; odd-numbered coefficients were good. Of course, selecting the date to confer this title was not quite this simple, because the man's birth date and marriage date also factored into the equation: a man born on an even-numbered day would schedule his ceremony on an odd day, and one born on an odd day would select an even day, because the combination of the two numbers would be odd; if born on an odd day and married on an odd day, however, he would choose another odd day in order to remain with the odds.¹³

In summary, the *tonalpohualli* organized into *trecenas* appears in its fully elaborated and embellished form in the Borbonicus and Tonalamatl Aubin. There it brings several layers of auguries to bear on each day. The first

day of the *trecena* dominates the others; it also seems to be the day most closely related to the supernatural and mantic imagery in the *trecena* panels. The first day and each successive day are then influenced by the forces of their individual day signs, their numerical coefficients or day numbers (manifest as Volatiles and Day Lords), and their Night Lords. All these forces combine to create the unique fate for each day. The Borgia Group codices elect to present only the day signs with the *trecena* patrons and images. They save the Night Lords and the Volatiles for separate almanacs, knowing that the diviner can consult them to elaborate the fate governed by the *trecenas*.

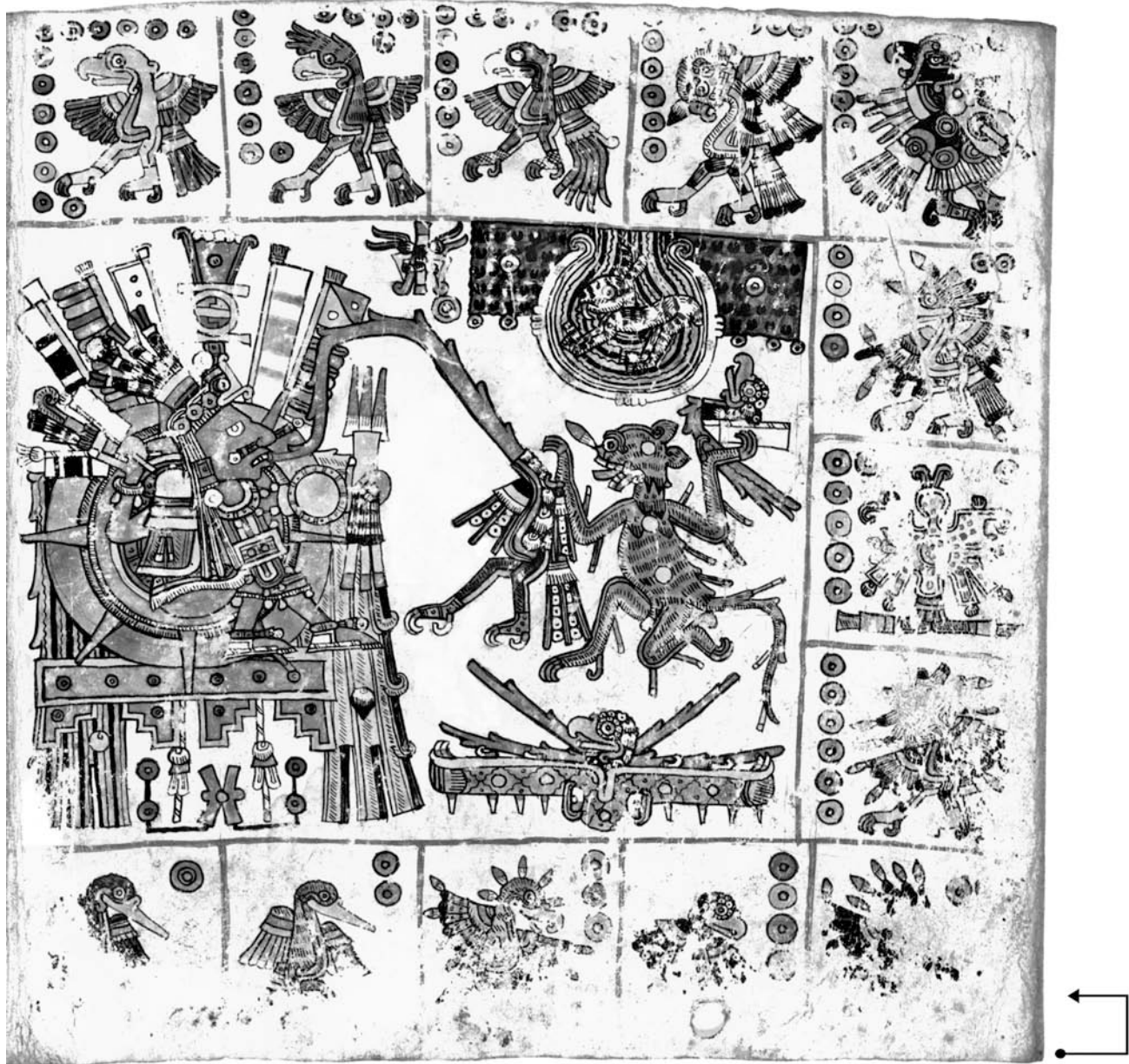
Twenty Day Signs and Their Patrons

The almanacs that divide the *tonalpohualli* into twenty *trecenas* privilege the continuity of the thirteen day numbers over the continuity of the twenty signs, for

the *trecena* organization keeps the thirteen numbers together while it breaks up the day sign series. This might suggest that the day numbers are the more important part of the day name, but all other evidence indicates that the opposite is the case. The central Mexicans put much greater emphasis on the mantic potential of the day signs rather than the day numbers. About

half (52 out of 102) of the almanacs in the extant divinatory books pertain to the series of day signs; the day numbers are rarely included. Only four almanacs, representing just two kinds, pertain specifically to the day numbers. The chroniclers likewise emphasize the signs over the numbers; Durán (1971:399–404) and Serna (1953:148) give prognostications according to

Fig. 55. The thirteen Volatiles. Codex Borgia 71. Photograph © Biblioteca Apostolica Vaticana.



the signs, and Sahagún speaks particularly about the first day sign in each *trecena*.

Structurally, day sign almanacs have some of the most varied presentations. They appear as simple lists, grouped lists, and diagrams, as well as combinations of these. In all cases the sequence of the signs remains the same throughout. The signs canonically begin with the first sign, Crocodile. In the few cases where they begin with another sign, that change becomes an important part of the augury. The majority of day sign almanacs are thematically focused on one aspect of indigenous life or another; but the most basic ones, and seemingly the most important ones, are general-purpose almanacs that relate each of the signs to its patron and a set of mantic features.

The Borgia and Vaticanus B both contain two examples of these almanacs.¹⁴ They are structured as lists, and the individual day signs either share a cell with their patrons and mantic elements or occupy adjacent cells (Fig. 56). Three of the almanacs—Borgia 9–13 and Vaticanus B 28–32 and 87–94—are virtually identical in their iconography, being parallel presentations of the same set of prognostications. The fourth almanac—Borgia 22b–24—offers an entirely different set of mantic elements, which seem to embody different influences. No one knows why the Vaticanus B contains two versions of the same almanac, or why the Borgia contains two strikingly different ones.

The almanac presented in three parallel versions unites each day sign with a patron deity and mantic elements; these secondary elements may combine in a scene or appear independently. The patrons (listed in Table 5) parallel the supernaturals who govern the *trecenas* (Table 6), except that Xochipilli occupies position eleven and Patecatl and his successors then follow in positions twelve (Grass) through twenty, as discussed in Chapter 3 (Seler 1900–1901: 36–37, 1990–1998, 1:43). In this way, Huehuecoyotl governs the fourth day Lizard, just as he governed the fourth *trecena* (beginning in 1 Flower). But although Patecatl governs the eleventh *trecena* (beginning with 1 Monkey), Xochipilli governs the eleventh sign (Monkey), and Patecatl stands as patron of the twelfth day sign, Grass. The count of twenty days is the fundamental count and prior to the *tonalpohualli*, so I suspect that the series of day sign patrons preceded and gave rise to the series of *trecena* patrons (see the discussion in Chapter 3).

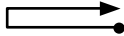
The Borgia locates its first day-patron almanac (pp. 9–13) directly after the great *in extenso* almanac that opens the codex and just before the nine Lords of the Night. This location presents the diviner with crucial information that he or she may need at the onset of a divination, for the auguries of the individual day signs carry considerable weight in the prognostications, as do the Night Lords. The Vaticanus B locates its versions less strategically: one is near the middle of the obverse, but next to marriage and childbirth almanacs, and the other leads up to the end of the reverse.

The three parallel almanacs are iconographic if not stylistic triplets. For Crocodile, for example, the creator god Tonacatecuhtli (Lord of Sustenance) rules (Fig. 57abc). In all three he sits with his arms in the same positions, wears an elaborately jeweled necklace, and has the butterfly fillet headdress often seen with solar deities; his headdress in the Borgia and on Vaticanus B 28 sprouts vegetation. In the Borgia, he is enthroned, like almost all the other patrons. The mantic scene is a copulating couple discreetly covered by a blanket. The scene is greatly embellished in the Borgia and on Vaticanus B 28, where the man and woman have elaborate headdresses, the blanket is of turquoise with a jeweled necklace and pectoral, and a white “rattle stick” of the type carried by Xipe and agricultural deities rises symbolically between them. The scene is plainer on Vaticanus B 87 but has a bowl of offerings and a crocodile, symbol of the earth. The day sign Crocodile thus carries with it the forces of creation, fertility (human and plant), and prosperity.

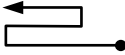
The chroniclers do not interpret Crocodile’s forces in exactly this way, but all agree that this day sign is positive. Sahagún (1953–1982, bk. 4), Durán (1971: 399), and Serna (1953: 148) designate the signs according to their overall positive and negative qualities (Table 8); but Sahagún and Durán also describe the forces and fates of each sign in more detail, and we should note that these fates do not always agree fully with their positive or negative designations. Still, they find only goodness in Crocodile. Durán (1971: 399) says of this sign that the man will be “of outstanding courage and strength, a hard worker, a great tiller of the soil, a famous warrior, a merchant, a man who is a good keeper of his wealth, desirous of increasing it, an enemy of idleness, addicted to constant activity, never wasteful, never prodigal, never tricky or unscrupu-

Borgia

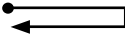
13		12		11		10		9	
11	12	13	14	15	16	17	18	19	20
10	9	8	7	6	5	4	3	2	1


Borgia

24			23			22	
20	19	18	17	16	15		
9	10	11	12	13	14		
8	7	6	5	4	3	2	1


Vaticanus B

28		29		30		31		32	
1	2	3	4	5	6	7	8	9	10
20	19	18	17	16	15	14	13	12	11


Vaticanus B

94		93		92		91		90		89		88		87					
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1



Fig. 56. Structure of the almanacs presenting the twenty day signs and their patrons: parallel versions in Borgia 9–13, Vaticanus B 28–32, 87–94; a variant in Borgia 22b–24. Diagrams by Markus Eberl.

lous.” Sahagún (1953–1982, bk. 4:1–3) is equally loquacious about the good fortune of this sign. A nobleman would be “a lord, a ruler; he would prosper; he would be rich and wealthy.” A commoner would be a “brave warrior, valiant chief, esteemed, honored, and great.” Women would “also prosper and be rich” and would help others less fortunate. But a person who failed in his

or her penances, ignored guidance from the elders, and thereby became bad and perverse would come to ruin despite the considerable merits of the day sign. Here we see that the textual record parallels the visual one only in a vague and general way; for although the visual elements in the almanac signal richness and increase, they more specifically refer to procreation.

The imagery associated with the fourth day sign, Lizard, is less consistent among the parallel versions (Fig. 58abc). All feature Huehuecoyotl as patron and include a bird, but thereafter they diverge. The Borgia and first Vaticanus B (29) versions share the most iconography. In these Huehuecoyotl wears an elaborate headdress, which in the Borgia includes the blue bird, two upright feathers diagnostic of Xiuhtecuhtli's headdress (cf. Borgia 13b, 14b), and four multicolored strips (ending with down balls) often seen on Tonatiuh's headdress (cf. Borgia 9a, 18b); he is thereby linked to the forces of fire and the sun. In both versions he menaces a nude or simply clad male. Seler (1963, 1:79) suggests that this figure either is being pushed downward by Huehuecoyotl or is falling because of the super-

natural's power. This recalls both the coyote's habit of threatening people along the road and Huehuecoyotl's proclivity to sow discord and cause ruin. In Huehuecoyotl's other hand he holds or pushes a string of jewels, which resonates with this association with the lords of pleasure.

The second Vaticanus B version (Fig. 58c) shares a different group of features with the Borgia. Both show the tail of a coral snake sticking out of Huehuecoyotl's mouth, as if the god were devouring the serpent or the coral snake were replacing the tongue. If Seler (1963, 1:79) is right in linking the coral snake to vice, then Huehuecoyotl is either devouring vice or emitting it: speaking evil. This reminds us of Huehuecoyotl's nature as a liar and deceiver. In these versions, also, the

Fig. 57. Patrons of the day sign Crocodile. Parallel versions: a, Codex Borgia 9b; b, Codex Vaticanus B 28a; c, Codex Vaticanus B 87. Variant is d, Codex Borgia 22b. Drawings by Heather Hurst.

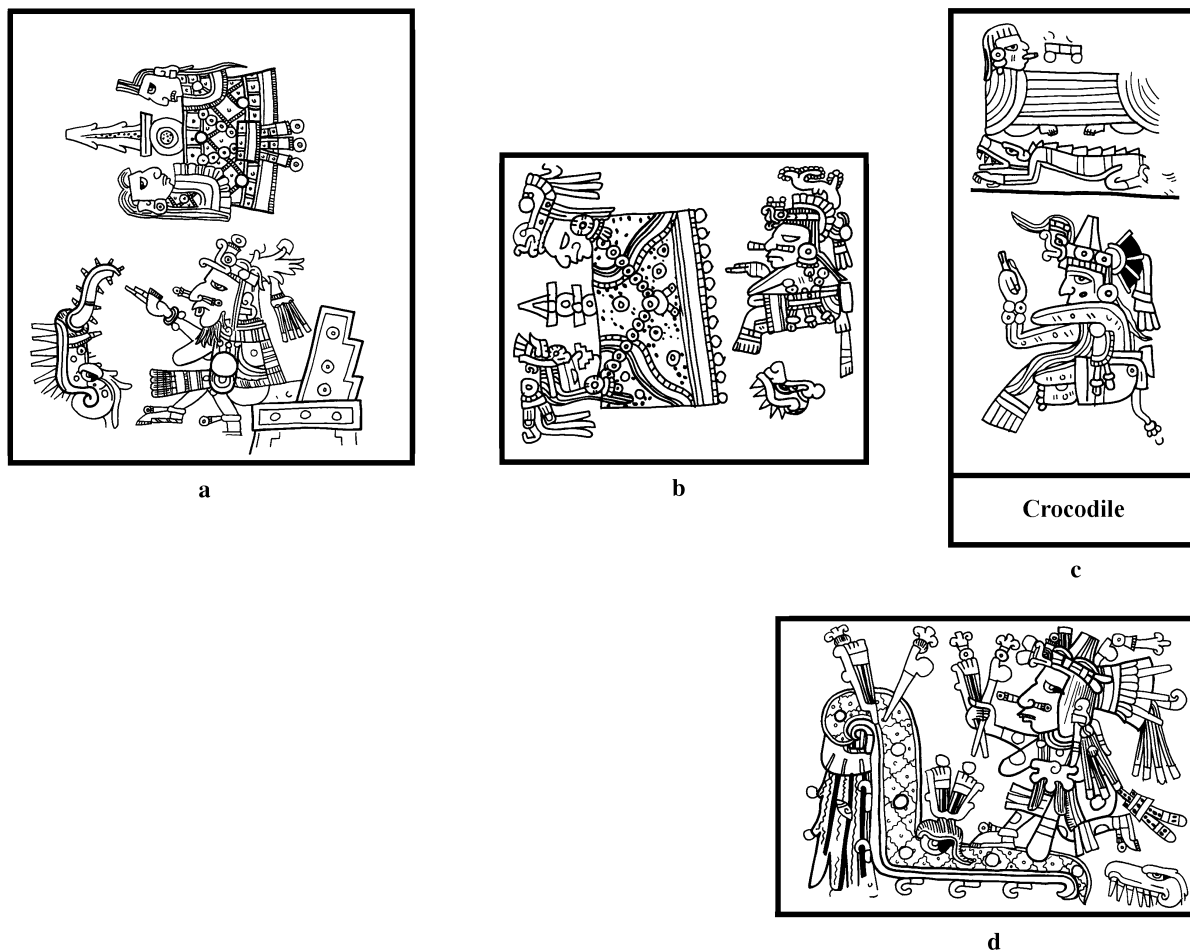


Table 8. THE TWENTY DAY SIGNS, THEIR PATRONS, AND THEIR AUGURIES ACCORDING TO THE CHRONICLERS

NO.	DAY SIGN	SUPERNATURAL PATRON	SAHAGÚN AUGURY	DURÁN AUGURY	SERNA AUGURY
1	Crocodile	Tonacatecuhtli	good	good	very good
2	Wind	Quetzalcoatl	bad	bad	bad
3	House	Tepeyollotl	bad	good	bad
4	Lizard	Huehuecoyotl	good	good	bad
5	Serpent	Chalchiuhtlicue	good	bad	reasonable
6	Death	Tecciztecatl	variable	bad	good
7	Deer	Tlaloc	good	good	good
8	Rabbit	Mayahuel	good	neutral	indifferent
9	Water	Xiuhtecuhtli	bad	bad	indifferent
10	Dog	Mictlantecuhtli	good	[good]	bad
11	Monkey	Xochipilli	good	neutral	very good
12	Grass	Patecatl	bad	bad	good
13	Reed	Tezcatlipoca-Ixquimilli	bad	neutral	good
14	Jaguar	Tlazolteotl	bad	neutral	very good
15	Eagle	Red Tezcatlipoca/Xipe Totec	bad	neutral	indifferent
16	Vulture	Itzpapalotl	good	good	bad
17	Movement	Xolotl	variable	neutral	good
18	Flint	Chalchiuhtotolin	good	bad	bad
19	Rain	Tonatiuh	bad	bad	good
20	Flower	Xochiquetzal	variable	neutral	bad

bird emits fluids that flow into or onto Huehuecoyotl; it is a wavy cord being fed to Huehuecoyotl in the Borgia, but it is excrement in the Vaticanus B. In this Vaticanus B almanac, creatures in the upper cell defecate on the supernatural lords in the middle cell five times. This is the only almanac in the entire corpus where imagery from one cell crosses over to influence the imagery in another cell, and it is clearly an intentional breach of the divinatory canon. This Vaticanus B bird, probably a turkey cock, has star symbols on its crest and a feathered

preciousness symbol at its chest. This might relate to the adage recorded by Sahagún (1953–1982, bk. 6:232) that the turkey hen is a metaphor for “something precious.” Huehuecoyotl holds what may be rushes and a white baton ending in a possum head; the meaning of this is not known.

Common elements in the three parallel versions refer to wealth, prosperity, or virtue (the jewels and perhaps the turkey), vice absorbed or evil spoken (the coral snake in the mouth), and human frailty (the man men-

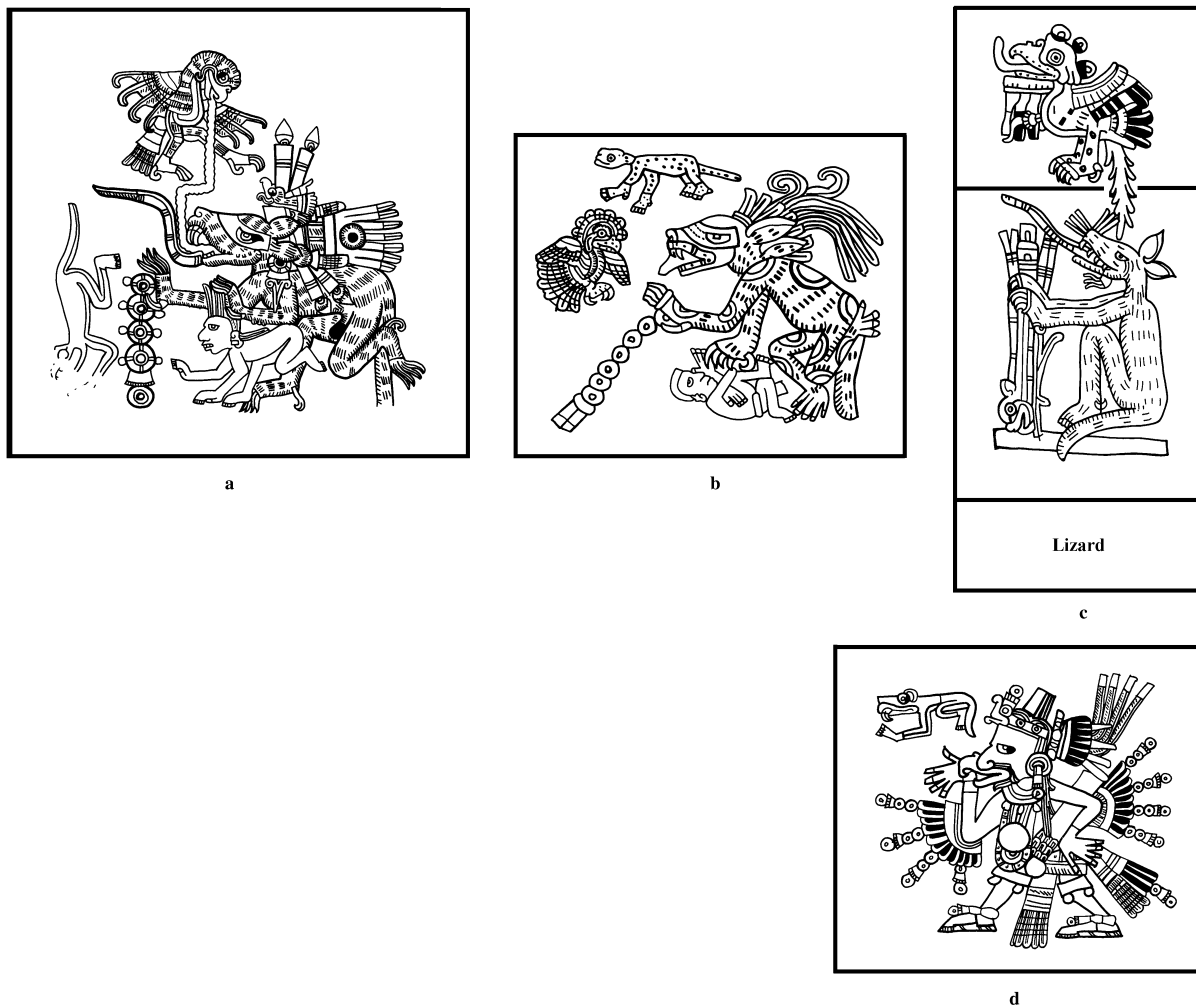


Fig. 58. Patrons of the day sign Lizard. Parallel versions: **a**, Codex Borgia 10b; **b**, Codex Vaticanus B 29a; **c**, Codex Vaticanus B 88. Variant is **d**, Codex Borgia 23c. Drawings by Heather Hurst.

aced). Huehuecoyotl carries his own complex of associations: song and dance, gaming, wealth, cunning, deceit, and sexuality.

The chroniclers who describe the meaning of the day signs do not refer to these images, however. They focus on the particular traits of the lizard and speak of wealth easily obtained. Durán (1971:400) describes Lizard as a good sign and says those born then would be fortunate: “He was to be outstanding within his family and to prosper vastly. He was destined to possess wealth and never be hungry. All of this was based on the characteristics of the lizard, which calmly rests on the wall, never lacking flies or mosquitoes, all of them coming naturally to his mouth. And so it was omended that the

man born under the sign was to be prosperous without great toil.” When Sahagún (1953–1982, bk. 4:83) speaks of the day 1 Lizard, which he says is regarded as favorable, he looks to the reptile’s agility and strength. Those born then would be “very strong . . . firm, hard, stout, robust, they said; lithe, mature, hardy, vigorous; and he was a good worker and diligent. . . . He dealt in many things. Whatsoever it was, it resulted well. It was not apparent nor known how that which he required appeared.” Neither augury refers to the complex imagery in the painted almanac to any great extent. The chroniclers give us poor, watered-down versions of the complex forces governing units of time, while the painted books still record the rich details.

The other almanac that relates the twenty day signs to their mantic forces, which is found only in the Borgia (22b–24ab), contains entirely different supernaturals and scenes. For Crocodile, a large crocodile mouth with water pouring from its snout symbolizes either the earth or the concept of polity: water-hill (*altepetl* in Nahuatl) (Fig. 57d). A supernatural who combines costume elements of Quetzalcoatl and Tonacatecuhtli stands above, holding bloodletters, and other bloodletters have been stuck into the earth mouth. The imagery may relate to wealth or rulership, both mentioned by the chroniclers; certainly it requires autosacrifice. For the day sign Lizard, a man dressed as a jeweled bird wears the butterfly fillet and gold pectoral of the sun god (Fig. 58d). The imagery recalls the textual auguries of easy wealth.

Corporeal Almanacs

A third genre of general-purpose almanacs relates the twenty day signs, and in a few cases the *trecenas*, to the parts of a supernatural, human, or animal body or bodies. As explained in Chapter 4, these are all diagrammatic presentations, where a living being is the armature to which the day signs are attached. The day signs then take their meaning from their location on or around the body, according to their attachment to a specific body part. There are over a dozen of these almanacs, representing ten different kinds; four kinds appear in both the Borgia and Vaticanus B.¹⁵

Some almanacs are unmotivated, in that they exist to link the day signs to areas of a body, where the body is neutral, although the position is not. Such are the two parallel deerskin almanacs on Borgia 53 and Vaticanus B 96 (which is the closing almanac in that codex), a slightly different deerskin almanac on Tudela 125r, and the male human on Vaticanus A/Ríos 54r (Figs. 59–61, Plate 5). Other examples pertain more specifically to different realms of life and experience, because their armatures are particular kinds of gods or animals. A striding Tlaloc on Laud 23 signals a rain almanac. The pairing of Quetzalcoatl and Mictlantecuhtli back to back (Borgia 56, 73 and Vaticanus B 75, 76) emphasizes the antithesis of life and death. The realms of other almanacs are less certain. In two independent presentations, a striding Tezcatlipoca on Borgia 53a and on Fejérváry-Mayer 44 serves as the foundation for the day signs

and *trecena* signs, respectively; these may have a general purpose, or they may be more closely related to night, war, or priestly concerns, areas where Tezcatlipoca holds sway. Two other examples, a combination of four gods flanked by four serpents (Borgia 72, Vaticanus B 73) and a presentation of four scorpions (Vaticanus B 95), effectively divide their counts into fourths.

The deerskin almanacs are the best known and may represent the fundamental type (Figs. 44, 59, 60). They picture the flayed skin of a deer, anthropomorphized to a greater or lesser extent and splayed out frontally. Since the divinatory codices of the Borgia Group are all on deer hide, the deerskins splayed out in these almanacs are metaphorical codices. Juan de Córdova (1987:203) in his *Arte del idioma zapoteca* also mentions such deer-skin almanacs on which the twenty day signs are distributed (Anders and Jansen 1993:96). The deerskin in the Tudela is plain, but the Borgia example has within its widely open mouth the face mask of Xochipilli or Macuixochitl, gods of flowers, song, dance, and pleasure (Fig. 44). The Vaticanus B deer is also linked to Xochipilli and Macuixochitl, being heavily jeweled, with turquoise lips, copious turquoise jewelry (the extensions of his great feathered wristbands include a monkey and parrot head), and a black eye mask with four clustered disks (a “sun” symbol characteristic of the costume of these gods).¹⁶ The Tudela annotator identified the figure as “toncayo mazatl,” “deer of our body” or “deer of our physical existence” (Anders and Jansen 1993:96).

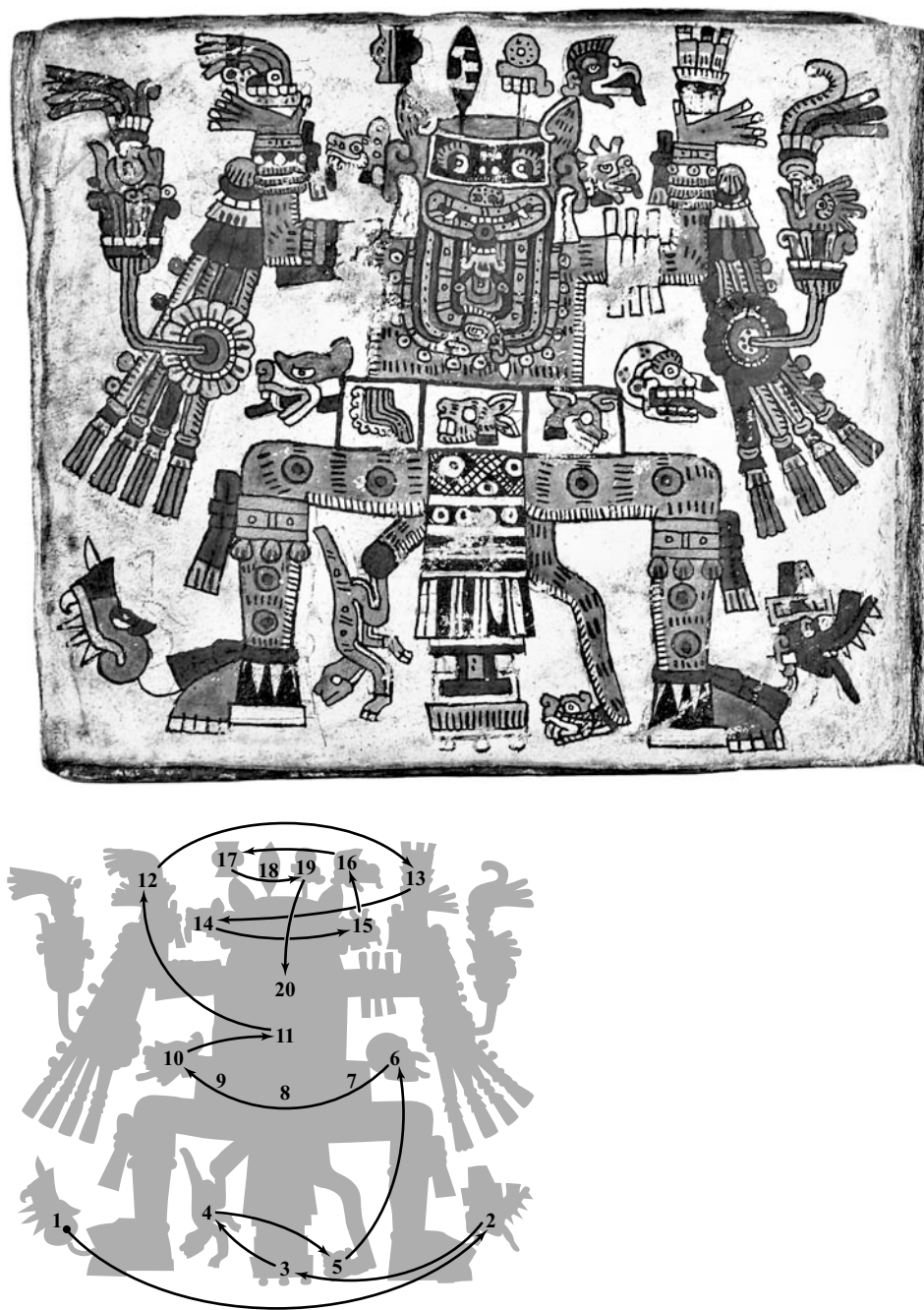
The Borgia and Vaticanus B versions are calendrically identical except that they are reversed left to right; this suggests that there was no differential meaning attached to the left or right side, as there is in Judeo-Christian ideology. As explained in Chapter 4, the twenty day signs begin at the bottom with Crocodile at the foot and generally read left to right, back and forth, rising up the body, and ending with Flower at the tongue (Fig. 44, 59). Crocodile and Wind are at the feet, House at the loincloth, Lizard at the penis, Serpent at the tail, the signs Death through Dog in the bowels, and so forth. The Tudela follows a slightly stricter left-right pattern (Fig. 60), working up the deerskin to the ears, descending through the eyes and mouth, and then dropping straight down to Flower at the base of the tail; a second Crocodile marks the tail’s very tip. Rather than displaying the bowels, it

locates day signs along the sides of the torso. Although the Borgia/Vaticanus B and the Tudela almanacs follow two slightly different patterns, they have more shared features than differences. They both maintain a decided left-right path, which begins with the lower extremi-

ties, rises to the ears or antlers, and then drops down to end along the middle line.

Other corporeal almanacs are less regular, seeming not to follow an established pattern. The elaborately costumed Tezcatlipoca on Borgia 17 begins its day signs

Fig. 59. Deerskin almanac. Codex Vaticanus B 96. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.



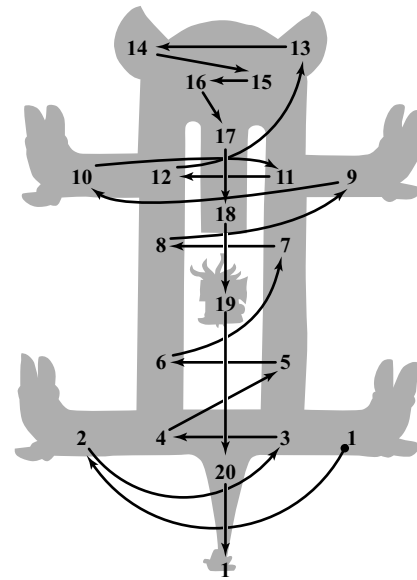
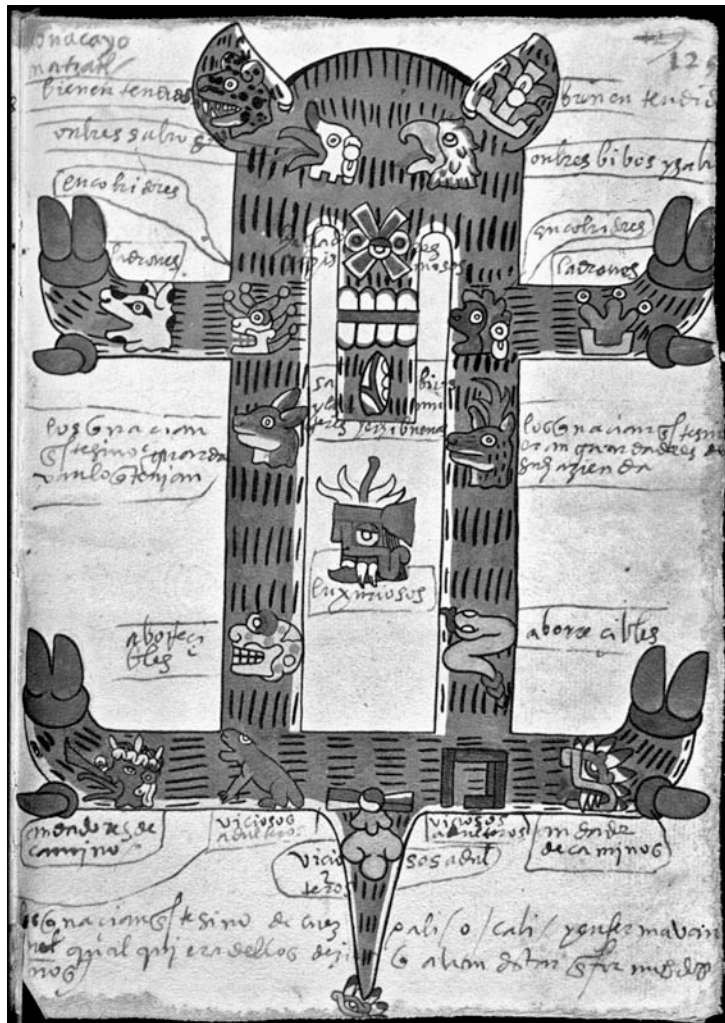


Fig. 60. Deerskin almanac. Codex Tudela 125r. Photograph courtesy of the Museo de América. Diagram by Markus Eberl.

at the bottom and generally locates the first five in that area (as do the Borgia/Vaticanus B and Tudela); but thereafter the signs disperse across the body and accoutrements in no clear order. The frontally presented human in the Vaticanus A/Ríos has day signs located in no rhythmic order (Fig. 61).

In these diagrammatic presentations the day signs tend to be linked to the parts of the body that are appropriate to them. The annotator of the Vaticanus A/Ríos almanac, Pedro de los Ríos, says that the signs are linked to parts of the body, depending on their nature (Fig. 61). Thus, in this early colonial presentation, Death (skull) is at the cranium, Dog is at the nose because of its sense of smell, Grass (twisted) marks

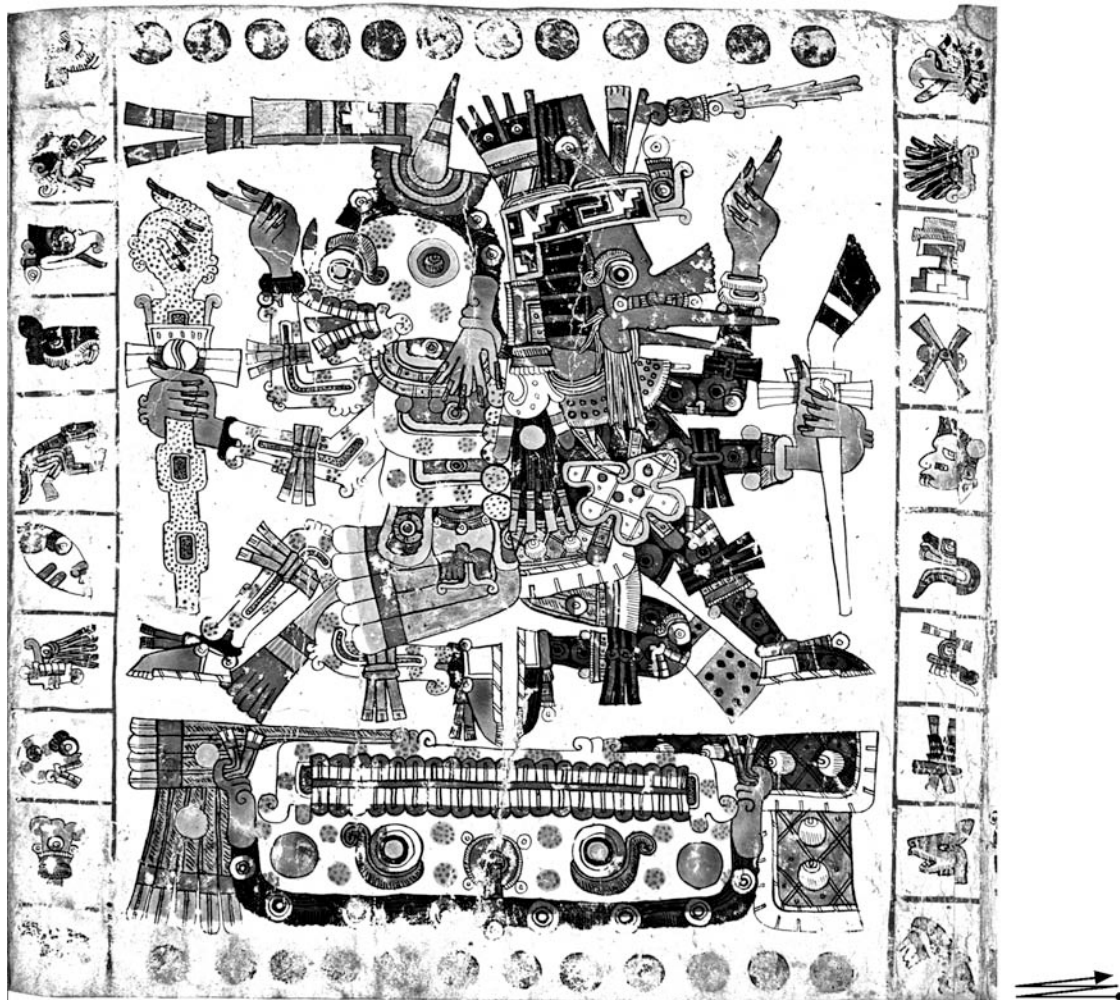
the intestines, Eagle and Monkey are at the hands because they can grasp things, and so forth. It is unclear whether these particular connections, some of which seem forced, are indigenous or colonial; but Ríos is surely correct in noting natural associations between signs and body parts.

In the other corporeal almanacs, the count usually begins at the bottom and moves upward, which locates the first day signs at the feet, tail, and genitals. Crocodile, the earth, always marks one of the feet. Wind either marks the other foot, as a sequent, or sits at the anus as a visual pun of flatulence. House is often at the loin-cloth. Serpent, with its length, is usually at the tail. Lizard is nearly always at the penis, although in the Vati-

A subset of these body almanacs involves two or more figures. Two different almanacs (both present in the Borgia and Vaticanus B) pair Quetzalcoatl and Mictlantecuhtli back to back. One (Borgia 73, Vaticanus B 75) presents twenty-five day signs in a frame around the pair and locates another set of the twenty day signs on the two deities, generally in the same places.¹⁷ The other pairing of Quetzalcoatl and Mictlantecuhtli (Borgia 56, Vaticanus B 76) combines the features of a diagrammatic presentation and a greatly compressed table of the *trecenas* (Fig. 62). Each *trecena* is identified by this initial day sign and twelve red disks that stand for the other twelve days in each *trecena*. The

spacers appear at the top and bottom in the Borgia and on either side of the gods' staffs in the Vaticanus B. The count reads from right to left, back and forth up the two sides of the almanac: Crocodile on the lower right, Jaguar on the lower left, Deer next up on the right, Flower next up on the left, and so forth. This creates a simple alternation between Quetzalcoatl and Mictlantecuhtli from *trecena* to *trecena*. Structurally it organizes the *trecenas* into two large groups of ten *trecenas* each, with the days in every other *trecena* pertaining to the life-giving Quetzalcoatl or to the death-receiving Mictlantecuhtli.

Fig. 62. *Trecena* signs arranged on either side of Quetzalcoatl and Mictlantecuhtli. Codex Borgia 56. Photograph © Biblioteca Apostolica Vaticana.



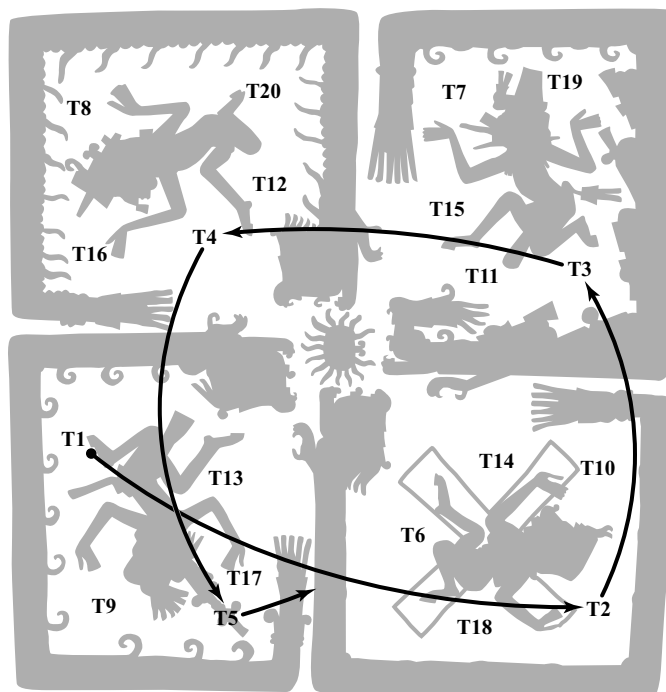
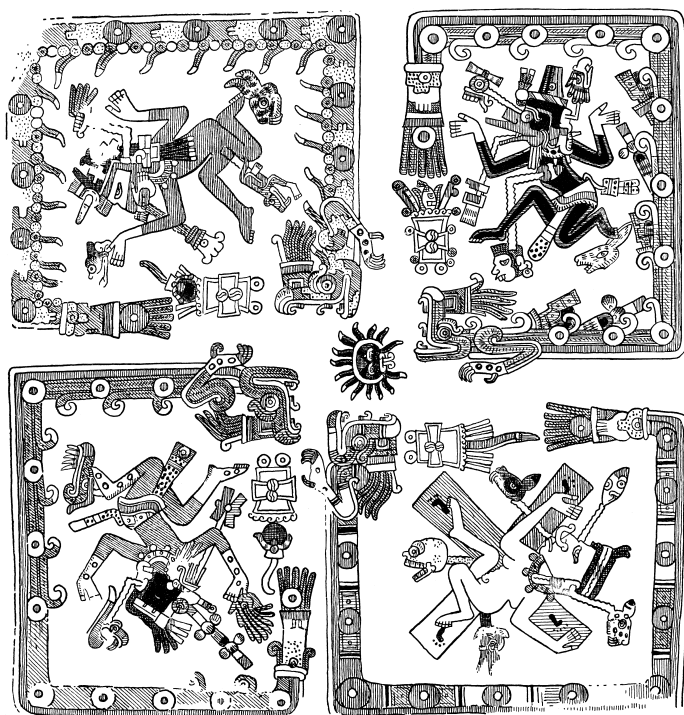
Other multiple-figure almanacs involve four figures each. On Borgia 72, four gods surrounded by four serpents each have five day signs attached (Fig. 63). They represent not day signs per se but the *trecena* signs, for each serpent body contains twelve disks marking the other days in the *trecena*. The count reads like a compressed table from one deity to the next: beginning at Crocodile (*trecena* 1) with Tlaloc in the lower left, Jaguar (*trecena* 2) with Tlazolteotl in the lower right, Deer (*trecena* 3) with Quetzalcoatl in the upper right, Flower (*trecena* 4) with Macuilmochitl in the upper left, and so forth, repeatedly encircling the spider in the middle.¹⁸ On Vaticanus B 95, four scorpions (painted with the face and body paint of Mictlantecuhtli, Tonatiuh, Tezcatlipoca, and Centeotl) have five day signs attached to their bodies (Fig. 64). The day signs read in groups of five moving from scorpion to scorpion, beginning and ending with the Mictlantecuhtli scorpion in the upper left. It is a simple but effective presentation that links different days to the realms of four gods and to the sting or poison of the scorpion; the Tonatiuh scorpion may mean either that the sun is stung or that

the sun itself causes the pain. Scholars have tended to associate such four-part almanacs with the cardinal directions (discussed below), although directional ties are not overt.¹⁹

These diagrammatic presentations of the day signs and *trecenas* over the body yield associations that are broadly applicable to many realms of Aztec life. Although Ríos describes the Vaticanus A/Ríos version as pertinent to healing, and the Tudela annotator ties that deerskin to children's fates, both can be used for other concerns. The day signs take meaning from the body parts with which they are associated, so that Flower days may be qualified by oral discourse, while Crocodile days remain earthbound.

The friars may have taken a special interest in these body almanacs because superficially they resemble versions of the "zodiac man" or "Homo Signorum" of Europe. These European diagrams pair the frontal human body with the signs of the zodiac, their purpose being to indicate where blood should be let or poultices applied at certain times to correct humoral imbalances in the body and thereby restore health (Bober

Fig. 63. *Trecena* signs arranged around the gods within four serpents. Codex Borgia 72 (from Seler 1902–1903:296). Diagram by Markus Eberl.



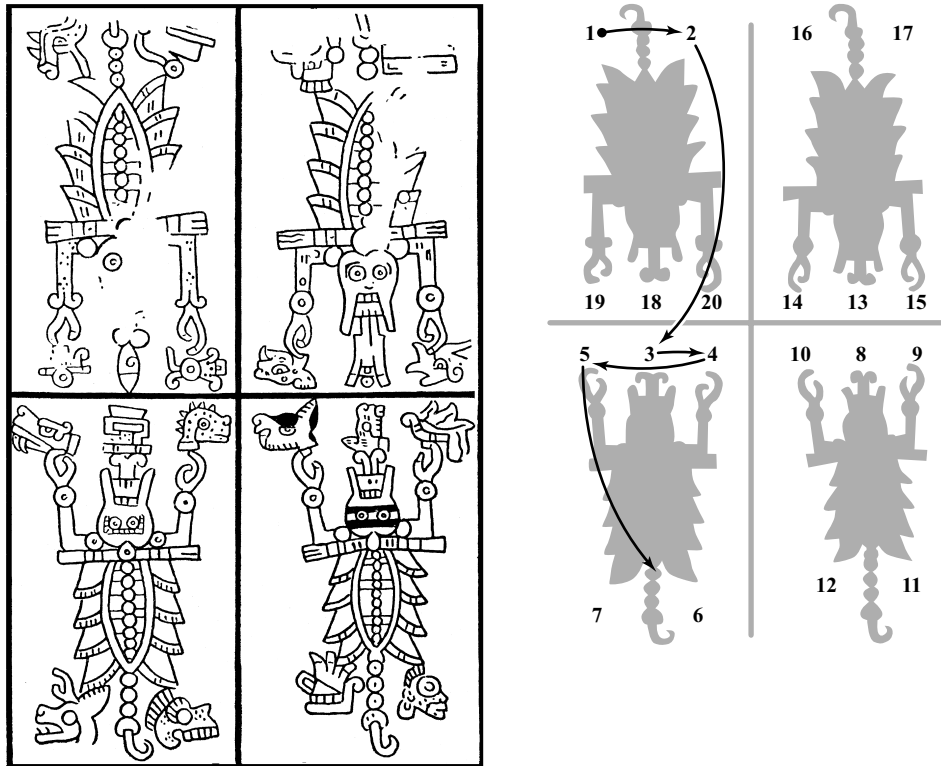


Fig. 64. Day signs arranged around four scorpions. Codex Vaticanus B 95a (from Seler 1902–1903). Diagram by Markus Eberl.

1948). They operate in the opposite way from the Mexican almanacs. In the Mexican almanacs, the day signs take meaning from the body parts; in the zodiac men, the body parts derive meaning from the zodiac. Zodiac men were a common feature of European medical and astrological treatises, and they were included in printed *Repertorios de los tiempos* (published almanac books) brought to Mexico in the sixteenth century (Bober 1948; Anders and Jansen 1993:93–96; Miram and Bricker 1996:394–395). One was even copied into the Codex Mexicanus (p. 12), along with other European calendrical tables (Mengin 1952:406–407; Prem 1978). Such European models influenced the body almanac in the Vaticanus A/Ríos (Fig. 61), although its core remained indigenous Mexican.

Directional Almanacs

Directional almanacs, like the general-purpose almanacs just discussed, are broadly applicable to many areas

of indigenous life. They link the days in the ritual count with those forces that adhere to the cardinal directions. In so doing, they acknowledge that the divinatory calendar has a physical or spatial reality and that the location of the days within the cosmic geography carries significant mantic weight.

Diego Durán (1971:391–393) speaks of the four cardinal directions as containing omens, signs, and auguries for the years that fall in those directions. East brought fortune, fertility, and abundance. North (called Mictlampa or Place of Death) carried associations of cold, ice, and thin air, and its years were barren, fruitless, dry, and hungry. West was associated by Durán with the death of the sun and considered evil. South was neither bad nor good. Although Durán was speaking of auguries for the years rather than the days, his characterizations of the directions are reflected in several of the pictorial almanacs.

The painted directional almanacs almost always refer to the four directions—east, north, south, west, generally in that order. Aubin No. 20 is a prime example

of a directional almanac that also integrates the fifth direction: center. Directional almanacs almost always involve all 260 days in the divinatory count, usually organized into *trecenas*, although two small directional almanacs in the Porfirio Díaz Reverse (33, 41) treat only the twenty day signs. The 260 days can flow as a continuous circuit that moves from one direction to the next; or they can be packaged as *trecenas* and organized as a compressed table, where each successive *trecena* belongs to a different direction and the cycle repeats multiple times.

Many almanacs that are organized in four or five parts that present the *trecenas* in four groups have been called directional because it is possible to assign directions to their parts. I am more conservative in my definition of directional almanacs, however. I identify as directional only those four-part and five-part almanacs whose imagery clearly signals and indeed highlights the different cardinal locations, whether these signals come in the form of cosmic trees or particular temples and supernaturals; the almanac's iconography must clearly relate it to the directions. For example, several five-part almanacs in the Borgia (e.g., the 10 Movement almanac and the almanacs that involve five rain gods on pp. 25, 27, and 28) lack overt directional indicators, and I discuss them under topical almanacs rather than here with the directional almanacs. Some scholars have assigned sections of the *in extenso* almanacs to the four directions and thus characterize them as directional; I do not, because their iconography points not to the directions but to fifty-two individual fates.

Directional almanacs include the formée cross almanac on Fejérváry-Mayer 1, a visually similar diagrammatic almanac in Aubin No. 20, and the complex (compressed table) almanac on Borgia 49b–53b. Both Aubin No. 20 and the complex Borgia almanac have multiple cognates; some of these cognates are directional, but others will extend our discussion to other areas as well.

The Shape of Time

Page 1 of the Fejérváry-Mayer is the most often reproduced page of all the Mexican codices (Fig. 65, Plate 6). It is both a cosmogram of the central Mexican world and a 260-day almanac, in which another almanac is embedded. Around a central figure of Xiuhtecuhtli, the lord of the year and of time, the 260 days of the

ritual calendar form a multicolored ribbon that defines a formée cross (often called a Maltese cross) together with a St. Andrew's cross. The broad arms of the formée cross are oriented toward the four cardinal directions, with east at the top. Narrower loops between the arms (the St. Andrew's portion) are oriented toward the intercardinal points. The 260 days flow continuously along this ribbon in twenty groups of thirteen days, the *trecenas*. Each *trecena* is represented by the first day sign of the period followed by twelve spacers standing in for the other twelve days. Beginning with the first day (Crocodile) in the upper right center, the count reads counterclockwise around the cross: the first five *trecenas* are associated with the east and northeast, the second five with north and northwest, the third five with west and southwest, and the fourth five with south and southeast. In this way, the count of the days creates a steady continuum that journeys from one direction to another, reaching each new cardinal direction every sixty-five days.

Each arm of the cross, and thus each direction, has its own color: red in the east, yellow in the north, blue in the west, and green in the south. Within the frame of each arm appear the two lords, the directional tree, and the bird that are associated with that direction and give meaning to it (Table 9).²⁰ Here and in other almanacs, the trees and birds are the favored directional indicators; the trees are considered cosmic trees that support the heavens. The nine lords—two in each direction and Xiuhtecuhtli in the center—are the nine Lords of the Night, who in other contexts influence the fates of the days in sequence; here they influence the days that fall within their directions. In this presentation, the Night Lords also deviate from their usual sequence: following the second and third lords, who are in the east, we would expect to find the fourth and fifth lords in the north; but here they are in the south, switched with the eighth and ninth lords, who are in the north. This might suggest that the almanac's creator simply reversed the two pairs. In any case, the female Night Lords are in the west, traditionally the direction associated with women.

The intercardinal loops have their own plants and animals and are topped with birds flying toward the center. Within the birds' bodies, circles around the day signs Rabbit, Reed, Flint, and House distinguish these day signs also as year signs. Beside the birds, dismem-

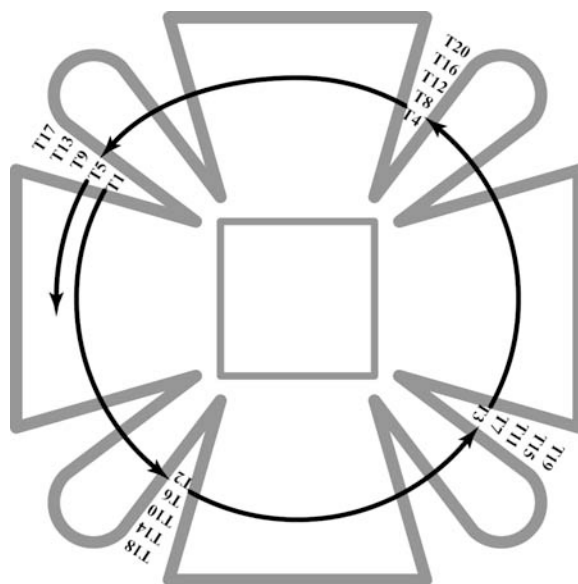
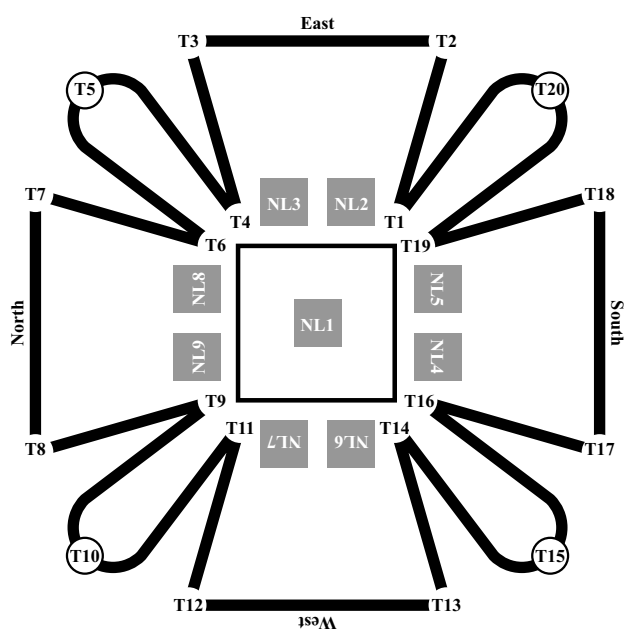
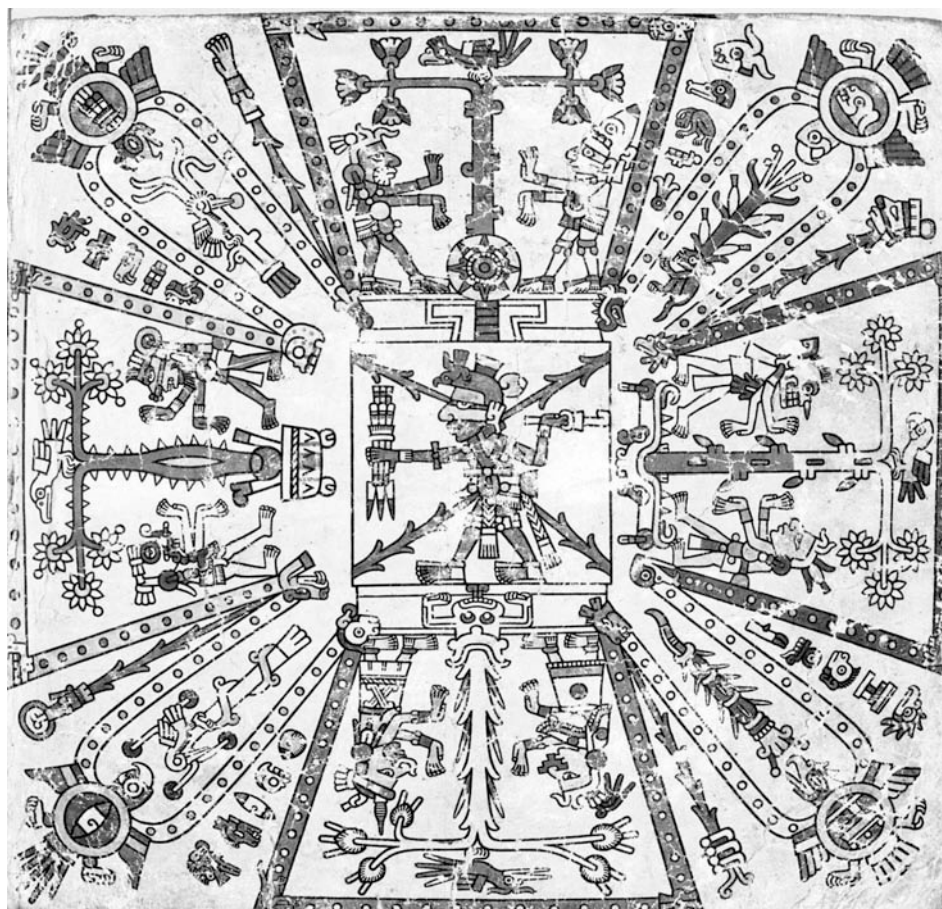


Fig. 65. Cross almanac. Codex Fejérváry-Mayer 1. Photograph courtesy of the National Museums Liverpool. Diagrams by Markus Eberl.

Table 9. MANTIC IMAGERY ON FEJÉRVÁRY-MAYER 1

Cardinal Directions				
	EAST	NORTH	WEST	SOUTH
Color	red	yellow	blue	green
Gods	Itztli Piltzintecuhtli	Tepeyollotl Tlaloc	Tlazolteotl Chalchiuhtlicue	Centeotl Mictlantecuhtli
Foundation	sun disk platform	bowl with bloodletters and rubber ball	moon monster platform	earth mouth
Tree	flowering	spiny, cypress?	thorn tree	cacao tree
Bird	quetzal	eagle?	hummingbird	parrot
Intercardinal Loops				
	NE	NW	SW	SE
Color	white	white	white	yellow
Plant	tall rushes	vine	nopal	maize
Animal	white water bird (?)	snowy egret (?)	coralillo	mouse
Year Bird	quetzal	scarlet macaw	eagle	parrot
Tezcatlipoca Body Part	hand and forearm	smoking mirror foot and shin	ribcage	severed head

bered body parts of the deity Tezcatlipoca (god of war, rulership, and divination) release blood that flows toward Xiuhtecuhtli in the center, as if the body of the god of divination were nourishing the lord of time at the center.

A second set of *trecena* day signs along the intercardinal loops functions as a compressed table that associates the sequent *trecenas* with the sequent directions: Crocodile (first *trecena*) with the northeast, Jaguar (second *trecena*) with the northwest, Deer (third *trecena*) with the southwest, Flower (fourth *trecena*) with the southeast, Reed (fifth *trecena*) with the northeast again, and so forth. This is the directional pattern followed by the compressed table on Fejérváry-Mayer 33b–34b (Fig. 42, Plate 2), discussed in Chapter 4, and we will see that it is the most common directional pattern.

In this one complex and masterful presentation, the painter has used the regular passage of the 260-day

ritual count and the continuity of the *trecenas* to recreate the physical space of the cosmos, with its cardinal directions, cosmic trees, birds, and the lords who rule those directions. As it passes, time moves from one part of the cosmos to another, absorbing the mantic meaning of each direction. The diviner can easily locate an individual *trecena* and see the forces governing its days according to its position within this directional world. Likewise, the year signs carry the meanings of their points. The second almanac, the compressed table, then reminds the diviner of another dispersal of *trecenas* over the directions. The physicality of the cosmos inscribes time with mantic meaning while the ribbon of time describes the cosmos as a physical and geographical entity. This single diagram, interpreted as a temporal and spatial map of the cosmos, shows how inextricably time is linked to space in the ancient Mexican mind.²¹

Although Fejérváry-Mayer 1 stands out as a unique presentation, a similarly structured, but graphically dif-

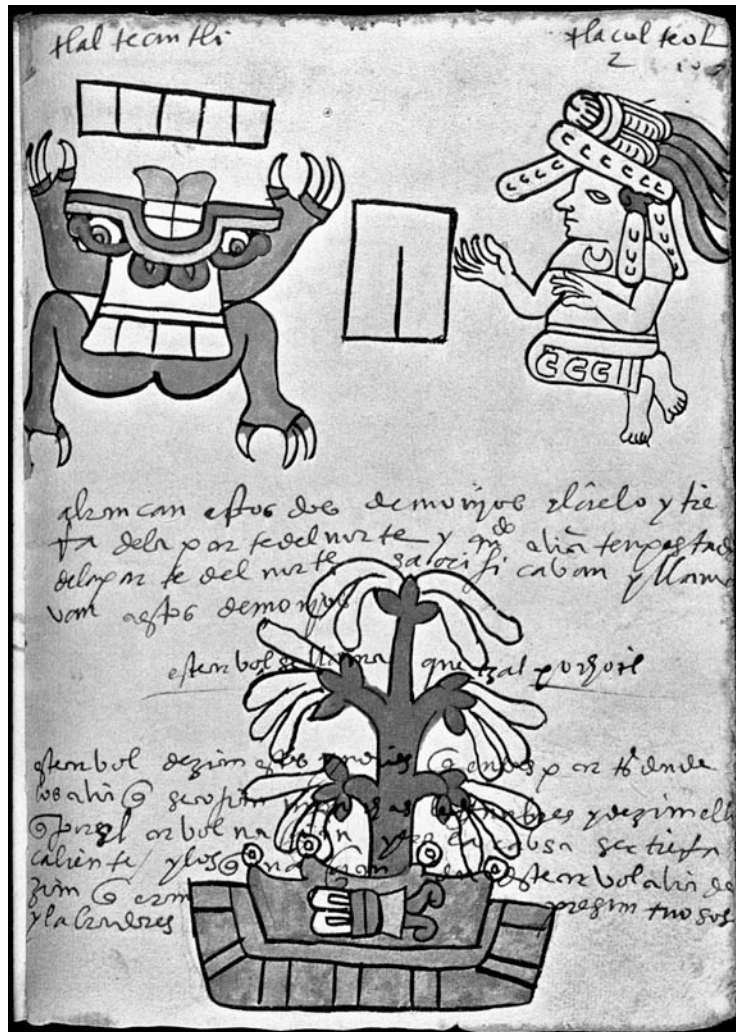


Fig. 66. Cosmic tree and lords governing the *trecenas* of the north. The tree is the ceiba; the lords are Tlaltecuhltli and Tlazolteotl. Codex Tudela 104r. Photograph courtesy of the Museo de América, Madrid.

ferent, linkage of the 260 days with the four directions is found in the Tudela (97–124). There the 260 day signs are all painted in a single row that runs horizontally across forty pages, with thirteen day signs aligned over each two-page spread; a Night Lord accompanies each day sign (see Fig. 54, Plate 3). At the beginning and before every fifth *trecena* (every sixty-five days), the painter breaks the row of day signs to present the cosmic tree (growing from a basin of water) and the two deities who govern those units of time (Fig. 66). This divides the 260-day count into its four quarters. Structurally, it is as if the formée cross of the Fejérváry-

Mayer 1 were stretched out as a straight line, interrupted by the governing lords and trees. The Tudela lords are not the Night Lords, however, and the cosmic trees also differ from those in the Fejérváry-Mayer.²²

The Five Directions in Aubin No. 20: Cihuateteo and Macuiltonaleque

The single hide sheet of Aubin No. 20 contains a directional almanac that is graphically similar to Fejérváry-Mayer 1 but calendrically and iconographically very different (Fig. 67). Like Fejérváry-Mayer 1 it is a temporal

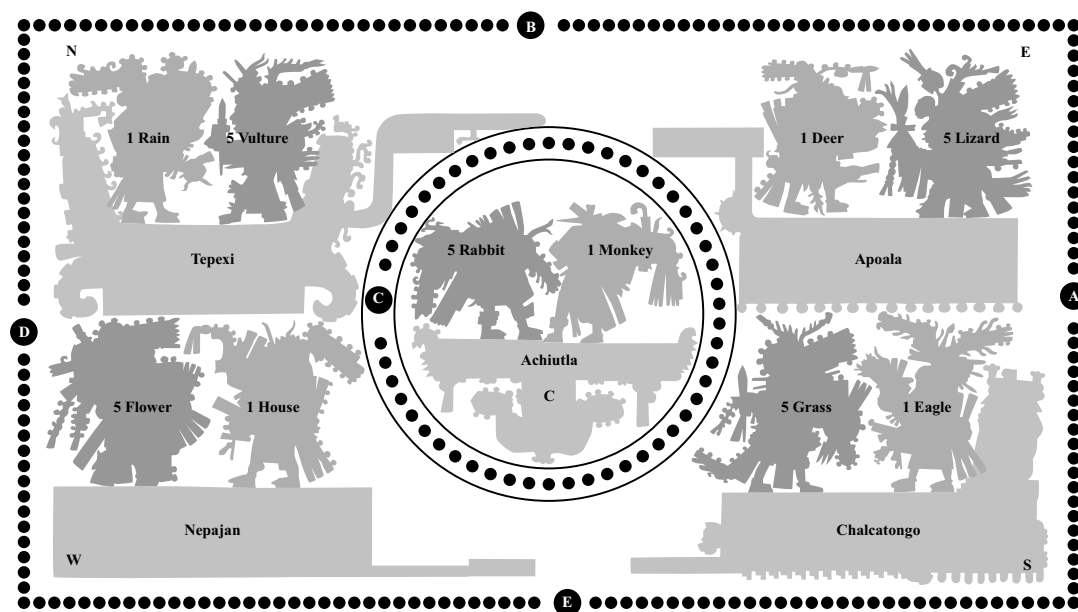
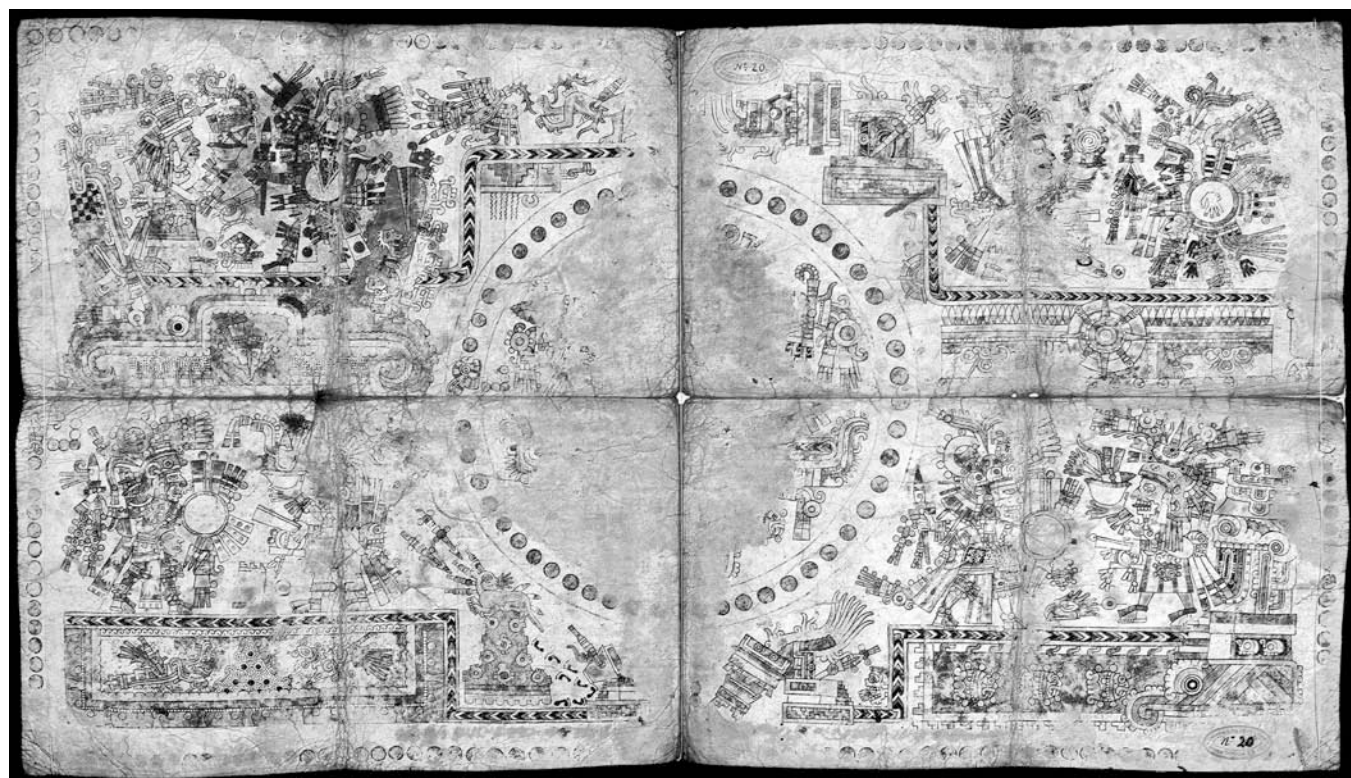


Fig. 67. Aubin Manuscript No. 20. Photograph courtesy of the Bibliothèque Nationale, Paris. Diagrams by Markus Eberl.

and spatial diagram of the cosmos, with the four directions at the four edges. Each direction is identified by an elaborate place sign on which two gods stand facing each other. All 260 days encircle the directions and thus flow through and around directional space.

In most other respects, however, the two almanacs present very different views of the world and its relation to time. Aubin No. 20 (now badly worn) presents the five directions—east, north, center, west, and south—equally, locating center naturally in the center of the other four. The flow of time is not regularly punctuated by *trecena* day signs, as in the Fejérváry-Mayer, but is instead marked by five day names. A string of 204 spacers (4×51 spacers) interrupted by four of the day names originally created a frame around the four directions, and another string of 51 spacers and one day name encircled the central direction in the middle.²³ The days are 5 Lizard (right), 5 Vulture (top), 5 Rabbit (center), 5 Flower (left), and 5 Grass (bottom), although the top and bottom days have been lost to wear. Beginning on the day 5 Lizard, which interrupts the border of spacers on the right (eastern) side, the count flows counterclockwise across the top of the panel for 104 days (including the lost 5 Vulture), moves inward around the center (beginning with 5 Rabbit) for 52 days, and then rejoins the frame at 5 Flower on the left to continue along the bottom for another 104 days (including the lost 5 Grass) until it reaches 5 Lizard again (Fig. 67). These coefficient-5 days which punctuate the string of spacers are the day names of the male deities standing at the directions.

The directions themselves are not simply generic areas of the world but are identified as specific locations by their unique place signs. These place signs also appear in the Mixtec historical codices, and they figure in Coixtlahuaca Valley codices as directional indicators.²⁴ Jansen (1982a, 1982b, 1:224–232, 244–277) correlated them with major ceremonial centers in and around the Mixteca Alta (Fig. 68). East in this system, signaled by the Sun Disk in the upper right, is Apoala, birthplace of the prominent Mixtec lineages. North, or Checkerboard Hill and Hill That Opens, is Tepexi. West, the River of Ashes, is Nejapan; and south, the Skull Temple, is Chalcatongo, burial place of Mixtec rulers. The badly destroyed central place sign has been identified by Martine Simonin (1989:145) as Achiutla.²⁵ Each direction is also qualified by a chevron war-

band that connects with a conquered polity, its place sign pierced with a spear and its temples in flames with roof ajar.

Four of these same place signs (all but center) create the template for another directional almanac, this one in the Porfirio Díaz Reverse (Fig. 69). There the twenty day signs are assigned to the four quarters: five signs per quarter, with the fifth sign placed in the middle of each directional image. The four quarters are identical to those featured in Aubin No. 20: Chalcatongo, Apoala, Tepexi, and Nejapan.

In Aubin No. 20, a male and a female supernatural stand facing each other on each direction. The males are the Macuiltonaleque (lords of number 5), poorly understood supernaturals who are otherwise connected with activities involving the hand (such as the patolli game, luxury crafts, and thievery) but are also associated with pleasure and lust. They are thought to be deified warriors who accompany the sun.²⁶ According to the *Histoire du Mechique*, they dwelt in the fifth of the thirteen heavens, between the sun god Tonatiuh in the fourth and the underworld lord Mictlantecuhltli in the sixth (Garibay 1979:103). A white band or hand, symbolizing the number 5, is painted around their mouths. They take the day names 5 Lizard, 5 Vulture, 5 Rabbit, 5 Flower, and 5 Grass, which punctuate the string of day signs. In Aubin No. 20, they are costumed as warriors, holding a flint knife in one hand and the shield-spears-banner symbol in the other; here they probably represent deified deceased warriors, parallel to their female companions.

The females are the five Cihuateteo, deified women who died in childbirth, who descend on the days 1 Deer, 1 Rain, 1 Monkey, 1 House, and 1 Eagle to threaten people at the crossroads and steal children (Sahagún 1953–1982, bk. 4:10, 41, 81, 93, 107). These goddesses take their days of descent as their day names. As befitting their nature, the Cihuateteo are accoutered with skull or death imagery, and they hold a banner and sacrificial cord in one hand and a vessel of bloodletting paraphernalia in the other. When paired with the Macuiltonaleque, the pairs brandish weapons, hold symbols of war and blood sacrifice, and wear skeletal and death imagery. This destructive message is carried by the chevron war-bands to conquered polities in each direction.

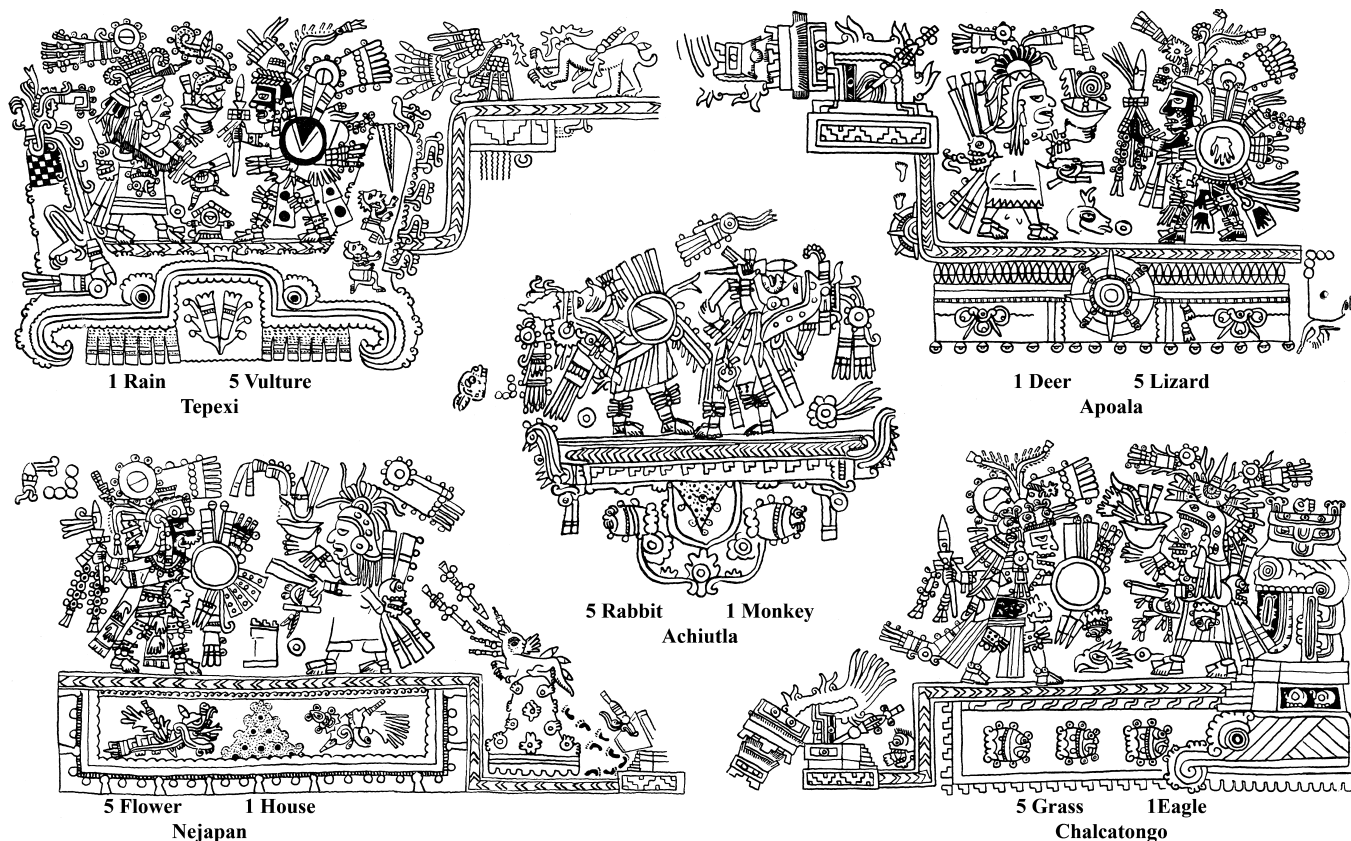


Fig. 68. The five directions, five Cihuateteo, and five Macuiltonaleque, Aubin Manuscript No. 20 (configured from Seler, 1904–1909, 2:101–102).

Calendrically the five Cihuateteo and five Macuiltonaleque form natural pairs. The females' day names begin *trecenas* 3, 7, 11, 15, and 19, which are often located in the west in directional almanacs (see the discussion of Borgia 49b–53b below), for the Cihuateteo dwelt in the west and accompanied the sun on its journey from noon to sunset (Sahagún 1953–1982, bk. 6:162–163). The Macuiltonaleque's names are the fifth days of the subsequent *trecenas* (4, 8, 12, 16, and 20), which are often then located in the south in directional almanacs.

The two pairs are thus presented in cognate almanacs in the Borgia (47ab–48ab) and Vaticanus B (77–79) (Fig. 70). In these two almanacs, the Cihuateteo and Macuiltonaleque are listed: each in a separate cell along with the thirteen days of their *trecena*, the females in the lower register paired with the males above. For each *trecena*, the Vaticanus B pictures the first and fifth day sign; and the Borgia depicts the first, fifth, and thirteenth, replacing the others with spacers. The first day

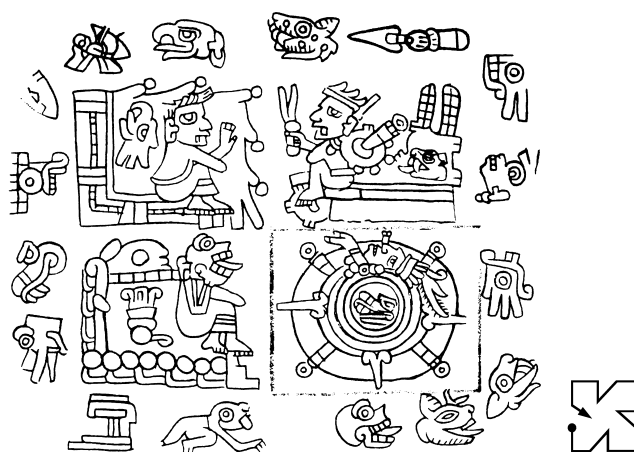


Fig. 69. Twenty day signs arranged according to the four directions, Codex Porfirio Díaz 33 (from Nowotny 1961:pl. 50b; reproduced with permission of Gebr. Mann Verlag). Diagram by Danielle Pierce.

with each Cihuateotl is her day name; the fifth day with each Macuiltonalequi is his day name. The pairs are the same pairs that preside in Aubin No. 20: the first pair in the Borgia and Vaticanus B (Lady 1 Deer and Lord 5 Lizard) appears in Aubin No. 20 in the east, the second pair in the north, the third pair in the center, the fourth pair in the west, and the final pair in the south. In the Borgia and Vaticanus B, all hold out bloodletters, which resonate with the bloodletting instruments the Cihuateteo hold in Aubin No. 20. But the Borgia and Vaticanus B Cihuateteo also interact with offerings, by breathing in smoke from burning rubber, emitting a centipede, or secreting blood that is then devoured by death figures (skeleton and screech owl). In the Borgia, the males absorb offerings being burned on the braziers in front of them.

These Borgia and Vaticanus B almanacs are directional insofar as they link *trecenas* elsewhere associated with the west and south with these male and female pairs. But they do not themselves complete a 260-day count, as do almost all the other directional almanacs; they treat only ten of the twenty *trecenas*. The other ten *trecenas* are not forgotten, however; in separate almanacs in the Borgia and Vaticanus B they are brought into association with two deer (Fig. 70 right). The “eastern” *trecenas* (1, 5, 9, 13, 17) appear with a white jeweled deer, and the “northern” *trecenas* (2, 6, 10, 14, 18) are with a brown deer that has been speared. Both

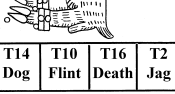
versions are organized as compressed tables that picture the first sign of each *trecena* and use twelve spacers to replace the other days. In the Vaticanus B, these deer *trecenas* appear just prior to the *trecenas* of the Cihuateteo and Macuiltonaleque (p. 77), effectively completing the cycle, although the two parts are structured differently. In the Borgia, the deer *trecenas* are located some distance away: on page 22a on the other side of the codex, in space left available by the beginning of a twenty-day count.²⁷ The organizational differences between the two parts and their spatial distance in the Borgia strongly suggest that these are separate almanacs, which uniquely treat only half the *trecenas*. The Borgia presentation immediately precedes the great directional almanac of 49b–53b and may also function to introduce it, for the Cihuateteo and Macuiltonaleque reappear there.

Multipart Directional Almanac:

Borgia 49b-53b

Most of four and a half pages in the Borgia (49b–53b) are given over to an elaborated and visually rich presentation of the *tonalpohualli* according to the four directions (Figs. 71–72, Plate 7).²⁸ This is the most iconographically complex almanac in all of the Borgia group, although its fundamental calendrical structure is simple. The almanac is organized as a compressed table

Fig. 70. Five Cihuateteo with the *trecenas* of the west and the five Macuiltonaleque with the *trecenas* of the south, preceded by the two deer with the *trecenas* of the east and west. Codex Vaticanus B 77–79 (configured from Seler 1902–1903).

79		78		77	
T20	5 Grass	T16	5 Flower	T12	5 Rabbit
					
					
T19	1 Eagle	T15	1 House	T11	1 Monkey
T8	5 Vulture	T4	5 Lizard	T18	T14
T16	5 Flower	T12	5 Rabbit	T10	T16
T20	5 Grass	T12	5 Rabbit	T16	T2
T19	1 Eagle	T15	1 House	T11	T16
T15	1 House	T11	1 Monkey	T7	1 Rain
T3	1 Deer	T17	Water	T9	Serp
T17	Water	T9	Serp	T5	Reed
T10	Flint	T5	Reed	T1	Croc

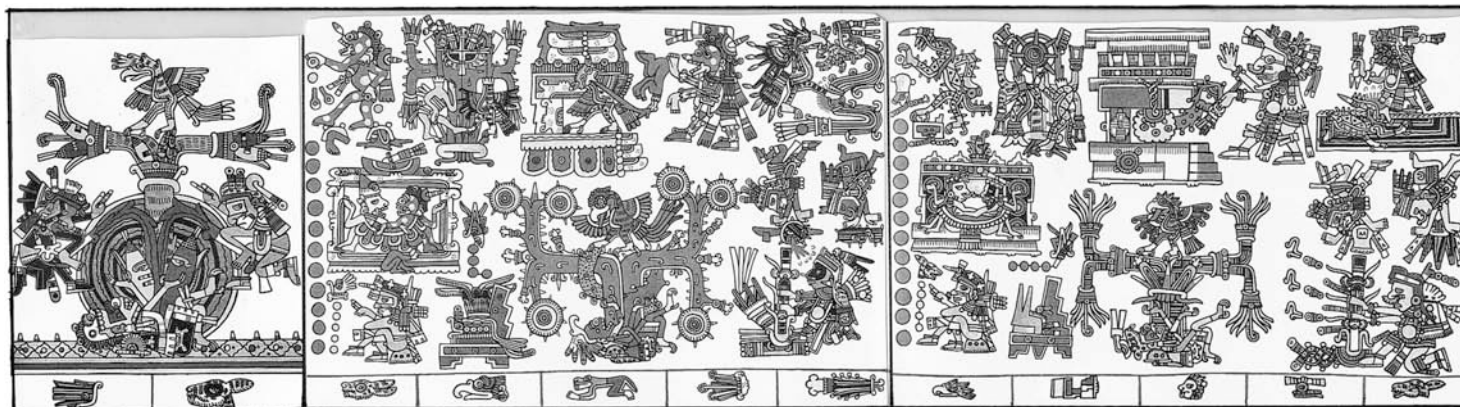


Fig. 71. Multipart directional almanac. Borgia 49b–53b (configured from Díaz and Rodgers 1993 [the two day signs on the lower left should be Rabbit and Eagle]). Diagram by Markus Eberl.

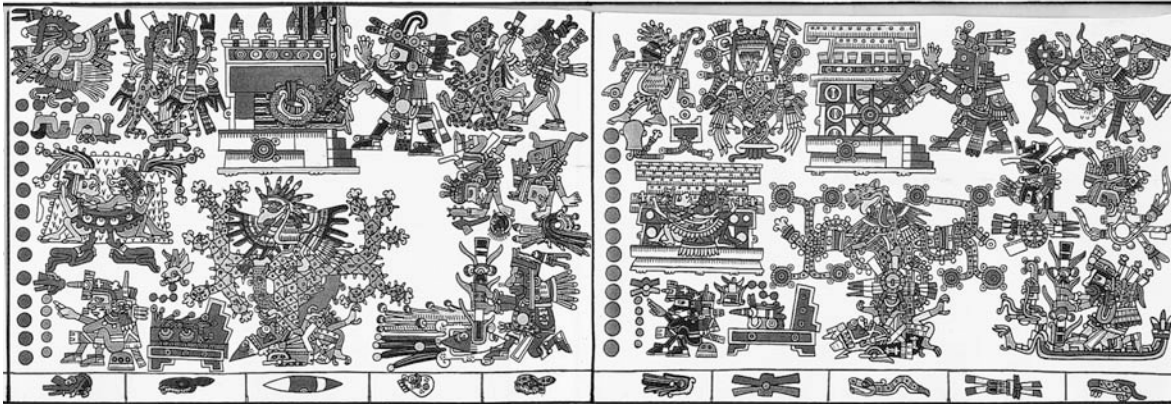
like that discussed in Chapter 4. The twenty *trecenas* are associated with four large mantic cells that contain imagery related to the four cardinal directions—east, north, west, and south (five *trecenas* per direction). The *trecenas* are indicated by their initial day signs (below the large mantic cell) and twelve spacers (in the mantic cell on the left side). Like the temple almanac discussed in Chapter 4, the successive *trecenas* jump from scene to scene and therefore direction to direction. The first *trecena* (Crocodile) belongs to east, the second (Jaguar) to north, the third (Deer) to west, the fourth (Flower) to south, and the fifth (Reed) back to east, and so forth. In this way, every fifth *trecena* pertains to east, and the count cycles through the mantic cells five times to finish out the full 260 days. These are the same groupings of *trecenas* that are stacked beside the intercardinal loops on Fejérváry-Mayer 1 (Fig. 65, Plate 6).²⁹

Within the large mantic cells, ten scenes or presentations appear, with their particulars varying from direction to direction (Fig. 72, Table 10). The two most prominent scenes, which are also those with the strongest directional associations, fall along the center line. They show a cosmic tree topped by a bird (1), above which is a supernatural making an offering at a temple (2). On the right side are three other scenes: an animal attack (3), a descending pair of Macuiltonaleque and Cihuateteo who bring down weapons and elements of war (4), and a supernatural drilling fire (5). The left side contains five seemingly distinct components: another

tree which supports a symbol that is wetted with the blood of decapitated animals (6), a full-figure day sign and four disks with upturned offering vessels (7), a marriage scene (8), a throne with year date having the coefficient 4 (9), and a seated Macuiltonalequi with a day name having the coefficient 5 (10).

A cell on 53b culminates the almanac, although it does not participate in the calendrical cycling of the *tonalpohualli*. There a fifth cosmic tree, a magnificent maize plant topped by a quetzal, is watered by the penis blood drawn by two male supernaturals: a Macuiltonalequi like those on the four preceding pages and “Stripe Eye” (Quetzalcoatl) from the earlier cosmogonic narrative (e.g., p. 33; see Chapter 7). Below, in the cells usually occupied by *trecena* day signs but now badly obliterated, are remnants of the day signs Rabbit and Eagle, which face each other and used to have speech scrolls rolling from their mouths. Because the bottom of the page is so badly damaged, it is not known whether numerical coefficients also once accompanied these day signs, and the meaning of the Rabbit and Eagle signs is not clear.³⁰

Four of the scenes in the large mantic cells have cognates or partial cognates in other codices. Two of these are the prominent directional scenes—the cosmic tree and the temple offering (1, 2)—that define the center line of the mantic presentations. The third is the animal attack in the upper right (3). As we have just seen, the Macuiltonaleque and Cihuateteo (4) also appear elsewhere in the Borgia and other codices.



53b	52b	51b	50b	49b
Center	South	West	North	East
	T20 T16 T12 T8 T4	T19 T15 T11 T7 T3	T18 T14 T10 T6 T2	T17 T13 T9 T5 T1

Cosmic Trees (1) The cosmic trees and their birds dominate the mantic cells by virtue of their central placement and physical size (they occupy more space than other scenes). They are the most clearly directional of all. Each tree grows from the belly of a clawed, skull-headed earth goddess, generally identified as Cihua-coatl. Each tree has a bird perched in the fork of its branches, and each has a symbol on or around its trunk. In the east, a quetzal sits in a jeweled tree intertwined with precious cords, with the symbol of war (shield, spears, and banner) on its trunk. In the north, a flinted eagle sits in a thorn tree, around whose trunk flow streams of blood and darkness. The west presents a blue raptorial bird (a hummingbird in the cognates) on a flowering maize plant with a maguey plant at its trunk. The south has a scarlet macaw on a red thorn tree, around whose trunk flow the streams of blood and darkness seen with the northern tree.

These cosmic trees and birds, but not the prone goddesses or symbols, have cognates and partial cognates in the Fejérváry-Mayer (1; Fig. 65, Plate 6), Tudela (97–124; Fig. 66), and Vaticanus B (17–18; Fig. 73).³¹ The Fejérváry-Mayer shares most of the same or similar trees and birds with the Borgia, but the Tudela presents different trees and lacks birds altogether. We have also

seen that these two almanacs are organized as continuous lists rather than as compressed tables. The Vaticanus B almanac is structurally identical to its Borgia counterpart, with successive *trecenas* linked to different directions (the spacers are arranged informally around the trees in the mantic cells). Its trees and birds are slightly different, however: instead of showing female bases, it pictures males who literally embrace the tree trunks with their arms and legs. It also includes a supernatural seated in the cell above each tree.³² These cosmic trees define and characterize the directions by embodying their basic qualities.

Temple Offerings (2) Next in prominence, just above the trees, are the scenes of supernaturals making offerings in their temples (Figs. 71, 72). In the east, the sun god Tonatiuh offers a bloody heart to the sun disk in a temple qualified by jades and flowers (symbols of preciousness). In the north, the god of frost and sacrifice Itztlacoliuhqui offers another bloody heart to the moon within a dark temple qualified by flints and black water. The west depicts the flower prince Xochipilli offering another bloody heart to a tobacco gourd, from which a jeweled twist emanates inside another jeweled and flowered temple. The south features the death

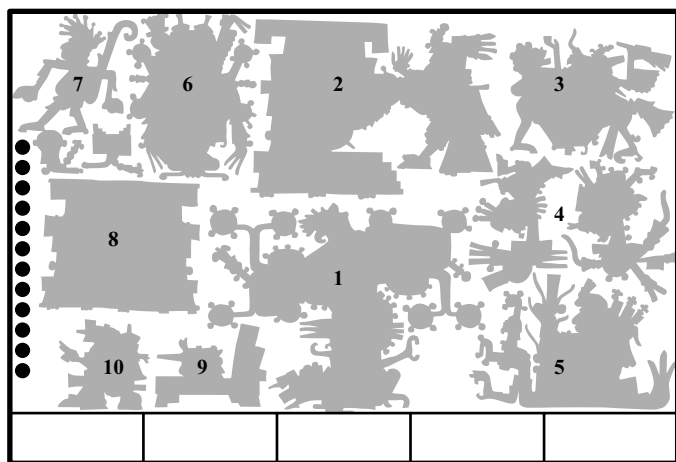
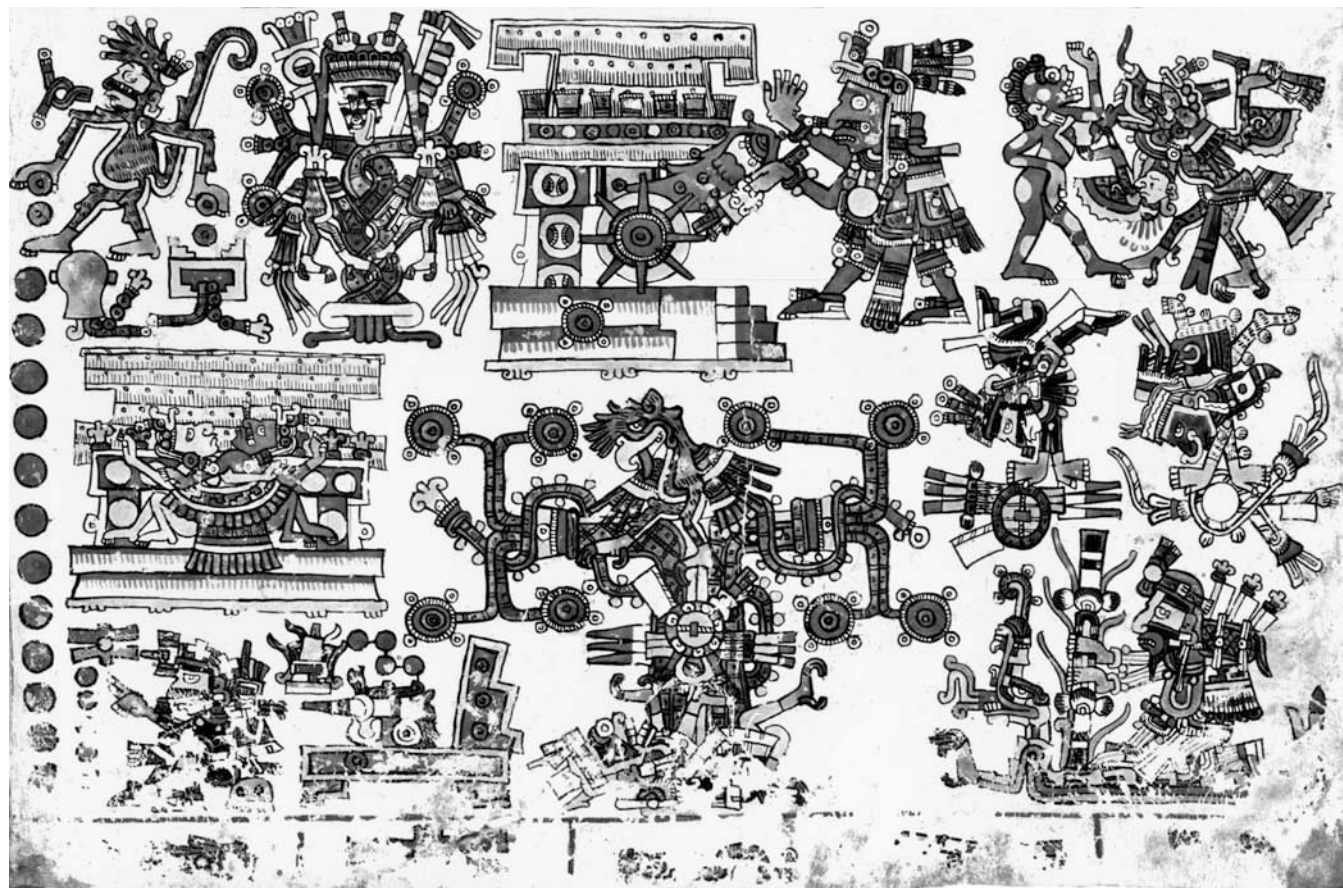


Fig. 72. The *trecenas* of the east. Borgia 49b. Contents of the mantic fields: 1, cosmic tree; 2, temple offering; 3, animal attack; 4, descending pairs; 5, new fire; 6, tree of sacrifice; 7, animated day name; 8, marriage; 9, year and throne; 10, day and god of number five. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.

Table 10. PROGNOSTICATORY ELEMENTS OF BORGIA 49B–53B

East

1. Tree: jeweled tree with quetzal, twining cords of preciousness, war symbol
2. Temple: Tonatiuh offers bloody heart to sun disk in precious temple
3. Attack: bat attacks death figure
4. Descending couple: black Macuiltonalequi 5 Lizard with war symbol, sacrificed Cihuateotl 1 Deer with cords of sacrifice
5. New fire: on fire serpent
6. Tree of sacrifice: jeweled tree, blood from quetzals flows to *cuauhxicalli* (“eagle vessel” for hearts), multi-colored banners
7. Animated day: 4 Monkey, offerings are jewels
8. Marriage: Tonatiuh and female sun god in floral temple
9. Year and throne: y4 House, Xipe (?) mask on throne
10. Day and god of number five: 5 Movement, black Macuiltonalequi

North

1. Tree: thorn tree with flinted eagle, streams of blood and darkness
2. Temple: Itztlacoliuhqui offers bloody heart to moon in flinted temple
3. Attack: Mixcoatl spears a jaguar who attacks a person
4. Descending couple: blue Macuiltonalequi 5 Vulture with axe, spiked club, and obsidian ball, blue Cihuateotl 1 Rain with water-fire (*atl-tlachinolli*)
5. New fire: on flint on bone, emitting water-fire
6. Tree of sacrifice: striped thorn tree (mesquite?) with eagle feathers as leaves, blood from eagle and jaguar flows to moon, banners of sacrifice
7. Animated day: 5 Vulture, offerings are blood and body parts
8. Marriage: Tlazolteotl and Macuiltonalequi in white mound with thorny flowers
9. Year and throne: y4 Rabbit, red fillet with black hair or water
10. Day and god of number five: 5 Wind, blue Macuiltonalequi

West

1. Tree: Flowering maize with blue bird, maguey plant
2. Temple: Xochipilli offers bloody heart to tobacco gourd in floral temple
3. Attack: Crocodile bites off foot of Tlahuizcalpantecuhtli (Tonatiuh in cognates)

Table 10. CONTINUED

-
4. Descending couple: yellow Macuiltonalequi 5 Rabbit with pulque jar, yellow Cihuateotl 1 Monkey with maguey plant
 5. New fire: on jade, emitting jeweled cords
 6. Tree of sacrifice: flowering tree, blood from fish and crocodile flow to sun disk, multicolored banners
 7. Animated day: 5 Crocodile, offerings are jewels
 8. Marriage: Chalchiuhtlicue and Tepeyollotl in maize temple
 9. Year and throne: y4 Reed, pointed turquoise diadem
 10. Day and god of number five: 5 Deer, yellow Macuiltonalequi

South

1. Tree: red thorn tree with scarlet macaw, streams of blood and darkness
2. Temple: Mictlantecuhltli offers decapitated human to screech owl in bone temple
3. Attack: Eagle and serpent battle over a rabbit
4. Descending couple: red Macuiltonalequi 5 Flower with axe and obsidian ball, red Cihuateotl 1 House with spiked club
5. New fire: on crescent nose ornament, emitting feathered panache
6. Tree of sacrifice: red thorn tree, blood from man and eagle flows to circle of zacate (?) grass, spear and banners of sacrifice
7. Animated day: 4 Death, offerings are blood and body parts
8. Marriage: flint goddess and death god in bone temple
9. Year and throne: y4 Flint, butterfly fillet of solar gods
10. Day and god of number five: 5 Grass, yellow Macuiltonalequi

Center

1. Tree: maize plant with quetzal, penis blood flows from Quetzalcoatl and the Macuiltonalequi 5 Grass, a great circle of water is behind
-

god Mictlantecuhltli offering a decapitated human to a screech owl within a bone temple. These gods or deity impersonators effectively make offerings to entities within their own temples: the sun, the moon, priestly office in the form of the priests' tobacco gourd, and death.

Equivalent temple offering scenes, featuring virtually the same gods and temples, appear also in the Fejérváry-Mayer (33b–34b; Fig. 42, Plate 2) and Cospi

(12–13), in almanacs that are structurally identical to the Borgia (although the Cospi version omits the spacers).³³ Where the Borgia gods make blood offerings, however, those in the Fejérváry-Mayer hold out bundles of kindling and a rubber ball (Fig. 42), and those in the Cospi offer up burning incense qualified by elements that resonate with their Borgia counterparts. The recipients in the Fejérváry-Mayer and Cospi vary slightly, as do the graphic qualifiers that identify the

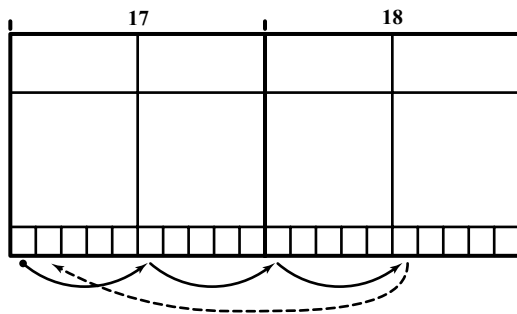
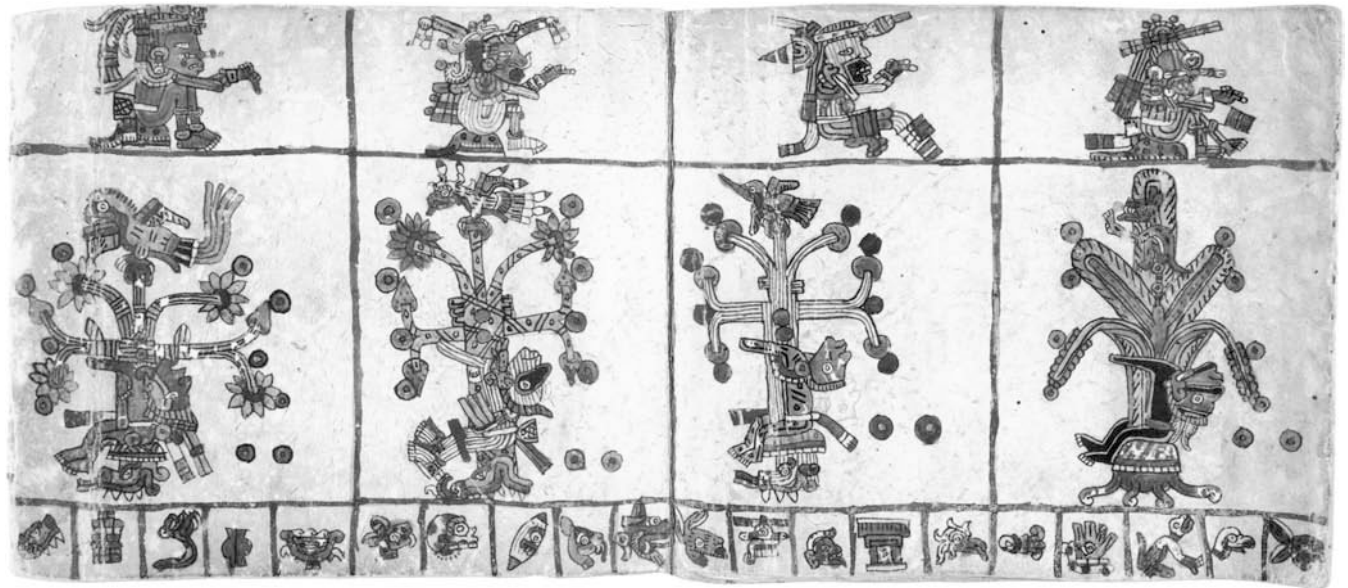


Fig. 73. Cosmic trees and patrons of the *trecenas*. Codex Vaticanus B 17–18. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.

temples, but the visual messages are essentially the same in all three versions.

Animal Attacks (3) The third principal scene that is repeated in other almanacs is the vignette in the upper right corner, depicting animal attacks. The same animal scenes, with only slight variations, are the subject of structurally identical almanacs in the Fejérváry-Mayer (41a–42a) and Vaticanus B (24–27) (Fig. 74). Most of the animals attack humans: a bat tears the heart out of a figure who is skeletal in the Borgia and merely dead in the cognates (east); a jaguar menaces a sacrificial victim and is himself speared by the hunting god Mixcoatl, who is purposefully nude (north); and a crocodile bites off the foot of Tlahuizcalpantecuhtli (Venus) in the Borgia and the sun god Tonatiuh in the cog-

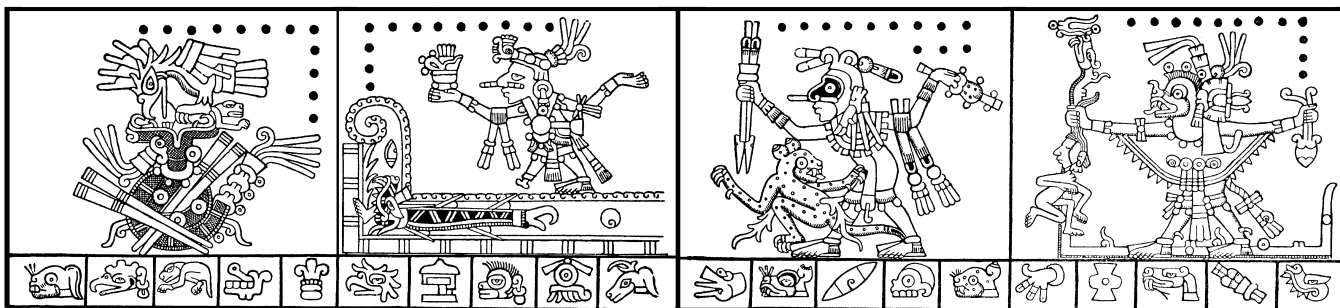
nates (west). The last scene (south) shows an eagle and serpent battling over a rabbit. The precise meaning of these presentations is not known, although they are some of the few instances where animals are the principal protagonists.³⁴

Descending Pairs (4) The fourth scene with cognates elsewhere is just below the attacking animals. There a Cihuateotl and a Macuiltonalequi descend, bringing down with them weapons or elements associated with war or destruction (4).³⁵ The symbols are cords of sacrifice, the shield-spear-banner grouping, and the water-conflagration (*atl-tlachinolli*) symbol of war; cutting implements include axes, spiked clubs, and obsidian. The western pair (Borgia 51) brings the maguey plant and pulque, which is elsewhere associated with war

Fejérváry-Mayer

42a

41a



Vaticanus B 24

25

26

27

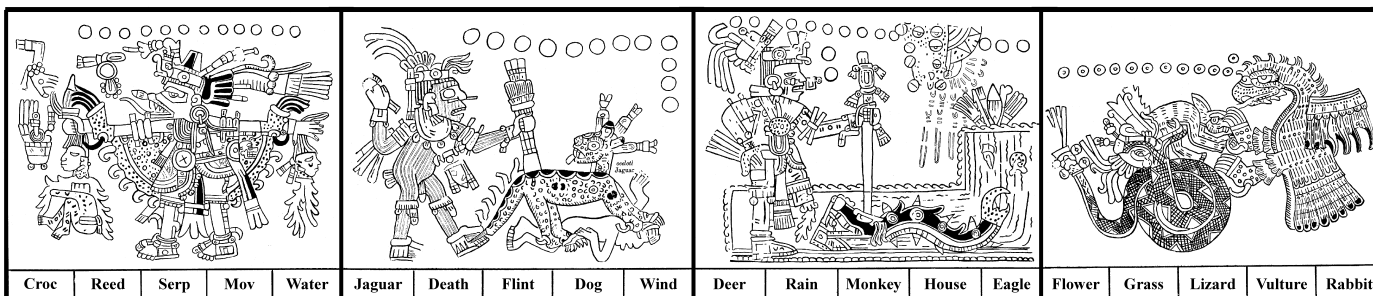


Fig. 74. Animal attacks: Codex Fejérváry-Mayer 41a–42a, Codex Vaticanus B 24–27 (from Seler 1901–1902, 1902–1903).

(e.g., a pulque god presides with the eagle and jaguar over the eleventh *trecena*; Fig. 33). The male of the pair (or a similarly colored Macuiltonalequi) reappears in the lower left corner of each cell, but with a different headdress; there he is seated on a jaguar-skin ottoman and accompanied by a day number with the coefficient 5 (discussed below).

These four Cihuateteo and Macuiltonaleque appear with a fifth in the almanac on the two pages just preceding this directional almanac (47–48; Fig. 70), as noted in the explanation of Aubin No. 20. They retain the same body and face paint as the first four of the preceding almanac (although the earlier Cihuateteo are more skeletal), which clearly is intended to indicate a correspondence between the groups and a linkage between the two almanacs. The directional Macuiltonaleque wear different headdresses than they do in the preceding almanac, but they carry the same imple-

ments and symbols that appeared with them earlier. The Macuiltonalequi who, with “Stripe Eye” Quetzalcoatl, bleeds himself in order to water the great maize plant of the central direction (p. 53b) is the fifth and last of the earlier group (associated on p. 48 with maize). The Cihuateteo and Macuiltonaleque function in this directional almanac to introduce (bring down from the heavens) destructive elements into the four quarters of the world. In Aubin No. 20, we saw how they dominated the four directions and center with these forces of conflict and destruction.

New Fire (5) The other six scenes in the Borgia directional almanac appear only in the Borgia and are even less well understood. Just below the descending Cihuateteo and Macuiltonaleque, in the lower right of the mantic cells, a male figure drills a new fire. The males for each direction are differently costumed, with body

paint and accoutrements relevant to several deities, but none is clearly identifiable as a single entity. Their fire boards differ: east has the fire serpent; north presents a flint on a bone, from which flows the fire-and-water metaphor of war; west pictures a great jewel that emits jeweled twists; and south features a crescent nose ornament, like that worn by Tlazolteotl. These scenes may relate to the founding of polities or cults or to the occupation of new homes, times when fires must be drilled.³⁶

Trees of Sacrifice (6) The scenes on the left side of the large mantic cells are even more enigmatic than those on the right. Another tree is depicted in the upper left, this time with a symbol that rests in the fork of its branches rather than appearing on its trunk. These trees are variations of those that stand for the directions, and the symbols resonate with other images in the mantic cell. For each, blood flows upward from the necks of decapitated animals to wet the symbol. In the east, it is a jeweled tree with two probable quetzal birds providing the blood that flows into a *cuanhxicalli* (an “eagle vessel” for holding blood, literally rendered here with an eagle’s head). In the north, it is a striped thorn tree supporting the moon, which is wet with the blood from an eagle and jaguar. The west has a flowered tree holding the sun, which is wet with blood from a crocodile and a spiny fish. South has a red thorny tree supporting what seems to be a tied circle of zacate grass, wet with blood from an eagle and a human. This combination of tree, symbol, and blood offering may indicate the type of offering likely to nurture the physical and cultural concepts represented by the trees and symbols.

Animated Days of Number Four (7) To the left of these sacrificial trees, the next scene features a day sign pictured as a full figure, along with four disks. The figures are Monkey, Vulture (represented here by Chalchiuhtotolin, the Jade Turkey), Crocodile, and Death. The figures are associated with four disks, two of which they hold in their hands or claws, and all but the Jade Turkey are posed as if dancing. Vessels containing offerings lie overturned at their feet, as if the moving figures themselves had disturbed the vessels. The disks probably represent day name coefficients rather than spacers, because spacers in the Borgia are uniformly red and lack any interior circle, whereas most of these disks

are other colors, and half have interior circles.³⁷ The days—4 Monkey, 4 Vulture, 4 Crocodile, and 4 Death—come 65 days apart, dividing the *tonalpohualli* into quarters. Although the meaning of these days is not fully understood, the little scenes may indicate that certain offerings (of the kind seen in the upturned vessels) will have no effect if presented then, for the animated days will thwart the effort.

Marriage (8) Below the trees and day signs, in the middle of the left side, are marriage scenes. A male and a female embrace and look at each other within a shelter, both covered by the marital blanket. The couples and their abodes change from direction to direction. East presents a solar couple within a flowered temple. North has Tlazolteotl and a Macuiltonalequi with stars in his “night hair” in front of a flowering white mound; the blood of decapitated humans flows toward them. In the west, the water goddess Chalchiuhtlicue and Tepeyollotl (Hill Heart) join within a temple of maize. In the south, a skeletal female with flint helmet joins the death god Mictlantecuhctli in the bone temple. These are surely marriage prognostications for those marrying during these *trecenas*.

Years and Thrones (9) The last two presentations, in the lower left corner, involve year dates and day names, which divide the 52-year cycle and the 260-day cycle into fourths. The year dates have the coefficient 4 and are associated with thrones that have headdresses on their seats. East is y4 House with Xipe Totec’s costume elements. North is y4 Rabbit with a red band topped by jade-studded black hair or black water. West is y4 Reed with the pointed turquoise diadem of Aztec rulers and pulque gods. South is y4 Flint with the butterfly fillet of the sun gods. These thrones and costume elements are probably prognostications for rule.³⁸

Days and Gods of Number Five (10) Beside the thrones, four Macuiltonaleque sit on jaguar-skin ottomans, which are normally royal seats. They have the same coloring as the Macuiltonaleque who descend on the right side of the mantic cells (4), but their headdresses feature the pointed cones and white crosses usually associated with death gods. They gesture, seemingly pointing toward accompanying day names—5 Movement, 5 Wind, 5 Deer, and 5 Grass—which are per-

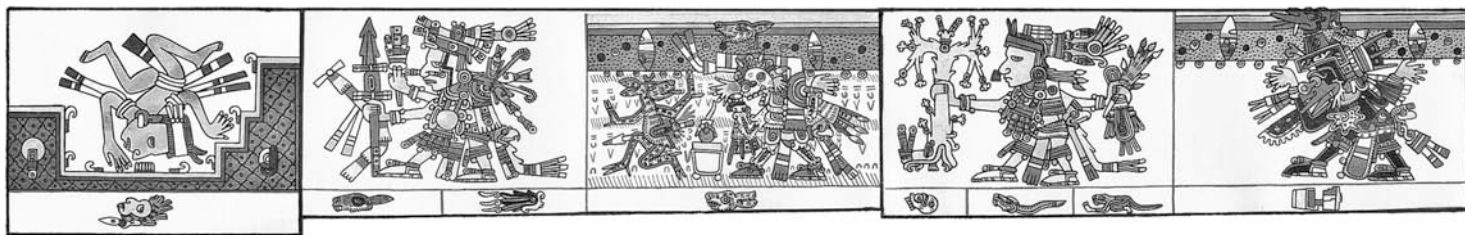


Fig. 75. Sky bearers and lords, associated with the twenty day signs beginning with Grass. Codex Borgia 49a–53a (configured from Díaz and Rodgers 1993). Diagram by Danielle Pierce.

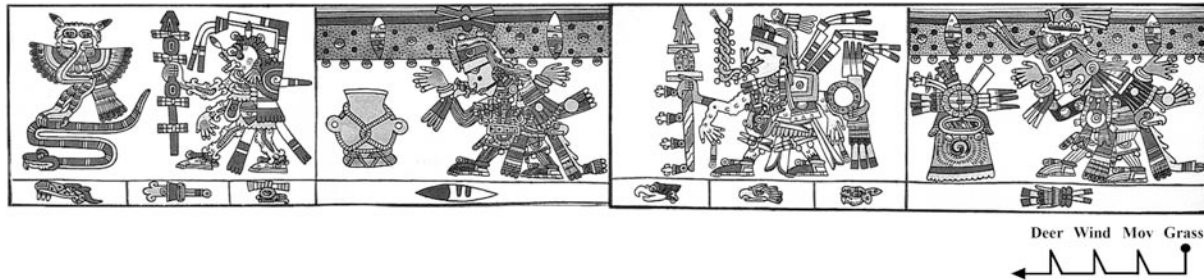
haps their own names but are not the usual names of the Macuiltonaleque (cf. Aubin No. 20, Borgia 47–48, Vaticanus B 77–79; Figs. 68, 70). In this directional almanac, it may be that the days are the meaningful units and that the deities exist to personify the days, rather than the other way around. The days are sixty-five days apart, which effectively divides the 260-day cycle into fourths.

The occurrence of specific day dates and year dates in this almanac naturally suggests that the almanac functions within the larger 52-year cycle and not simply the 260-day cycle. Nowotny (1961: 232, 2005: 251) mentioned the possibility that the day names in this almanac could be read in combination with the year dates (e.g., y4 House d5 Movement) to reach specific dates in the larger cycle. Recently Christine Hernández and Victoria Bricker (2004; Hernández 2004, 2006) have offered several linked proposals for reading the year dates in combination with the two sets of day dates in order to locate the almanac and its imagery in real time, as they have done successfully with the rain almanacs on Borgia 27–28 (discussed below). They suggest that the combination of d4 Crocodile and y4 Reed on Borgia 51 refers to a Venus event on March 31, 1483, which they equate with the scene in the upper right of that page, in which Tlahuizcalpantecuhtli's foot is bitten off by a crocodile (see note 34). Using this date as a key, Hernández (2004: 348–353) proposes that the year dates can also be combined with both the coefficient-4 days and the coefficient-5 days to yield specific days in the years 1457–1496, some of which may be associated with agriculture. She additionally proposes that the fire-drilling scenes refer to New Year ceremonies for the coefficient-4 year dates in each cell (Hernández 2004: 338–342, 357). These are extremely provocative

suggestions that warrant further study. At present they do not explain why these particular year and day dates appear where they do in the almanac or account for many of the relevant scenes in the mantic cells, and they require that the coefficient-4 days and years be divorced from imagery to which they are so closely linked. Seler (1963, 2: 100–101) felt that the physical distance between the day and year dates and their clear association with different images argue against their union. Certainly, however, the day dates and year dates throughout the almanac are related in complex and still poorly understood ways.

The almanac directly above this great directional almanac, on Borgia 49a–53a (Fig. 75), seems calendrically tied to it as well. This upper almanac alternates four sky bearers with four standing gods, followed by the scene of a human falling into the earth. It begins, unusually, with the day sign Grass, which appears in the heavens just above Tlahuizcalpantecuhtli's head. Each sky bearer is associated with one day sign in the sky and another in the cell beneath him; the standing deity then has the three subsequent day signs, except that the last day, Monkey, is reserved for the final cell with the falling human. The day sign in the wide cell beneath each sky bearer (Reed, Flint, House, Rabbit) matches one of the *trecena* days in the almanac below; and it matches the *trecena* in which the coefficient-5 day associated with the Macuiltonaleque occurs. For example, beneath Tlahuizcalpantecuhtli on 49a is Reed, which in the lower directional almanac (49b) opens the second *trecena*; the day 5 Movement in this cell is the fifth day of the *trecena* beginning in 1 Reed. The upper almanac's aberrant starting sign Grass makes this correlation work.

This starting sign also allows the count to end with



the eleventh sign Monkey, which is at the center of the 20-day count, so that the falling human in the last panel of the upper register parallels the final maize tree in the lower register as a metaphor for the central direction. Because this upper almanac highlights four day signs that are important to the directional almanac below, and because it features four sky bearers, I follow Seler (1902–1903:81–82, 1963, 2:105) in reading it as another directional almanac, but one that provides collateral information for the main directional almanac below.³⁹ Its exact cognate appears in the Vaticanus B (19a–23a) just following the arrangement of the *trecenas* according to the four cosmic trees (17–18), discussed above.

Directional Forces The ten scenes that occupy the large mantic cells of the four directions work together to shape a coherent message for each direction. Within each cell, elements from one scene reappear in other scenes, and they share meaningful associations.

East features solar imagery as well as jewels and flowers (symbols of richness and abundance). Its cosmic tree (1) is jeweled and supports a quetzal (also a symbol of richness). The tree and quetzal then reappear as the sacrificial tree (6) in the upper left. The jewels and flowers identify the solar temple in which the sun god offers a heart to the sun disk (2). A similar temple hosts the married couple wearing the jeweled butterfly fillet of the sun god (8). The bat attacking the human in the upper right (3) also wears this butterfly fillet. On a darker note, the shield-spear-banner symbol of war, which is carried down by the Macuiltonalequi (4), reappears on the cosmic tree at the center (1).

The west (the third mantic cell) shares the east's solar and jeweled references but extends its imagery to embrace agriculture. Its cosmic tree is a maize plant (1), and gods related to the growth of crops, Chalchiuhtlicue (water goddess) and Tepeyollotl (Hill Heart), are

joined in marriage in a maize temple (8). A maguey plant marks the cosmic tree (1), having been brought down with pulque by the descending pair (4). Jewels qualify both temples (2, 8) as well as the newly drilled fire (5). The sun appears in the flowered tree of sacrifice (6).

North and south (the second and fourth mantic cells) are likewise paired, sharing sharp and cutting qualities. Streams of blood and darkness encircle their cosmic trees (1). But north stresses flint knives, which identify the central temple as one of flints with a flinted moon inside (2). The god who offers blood to the moon in the north is the flinted god of sacrifice and frost, Itztlacolihqui. Flints qualify the thorny cosmic tree and stand out from the feathers of the eagle perched on top (1). The new fire is drilled on a large flint knife (5). War, in the form of the water-conflagration metaphor, is brought down to the north by the descending goddess (4), and it streams forth from the flinted fire board (5). South features skeletal and death imagery in the form of Mictlantecuhctli making an offering to a bone temple (2), the animated day sign Death (6), and the skeletal marriage pair (8).

These complex mantic cells include imagery that touches many aspects of indigenous life. Gods, cosmic trees, birds, and symbols call up qualities inherent in the directions, which are broadly applicable. Descending pairs bring symbols of sacrifice and destruction. Different scenes then pertain to new homes and new cults, to marriage unions, to the efficacy of offerings, and to rulership. The whole effectively describes the qualities and accoutrements of the four directions, as these characterize and influence the *trecenas* pertaining thereto.

The almanac's broad coverage of religious and social themes (and its directional quality) suggests that it may also be read on another level: as an explanation

of the establishment of society, polity, and cult in the four directions. The almanac follows very soon after the end of the cosmogony in the Borgia narrative section; only the partial almanacs associated with the Macuiltonaque and Cihuateteo intervene, and these creatures came into being in the cosmogony and descend bringing weapons and elements of sacrifice into the directional almanac. If the Borgia cosmogony explains how life was initiated and how the elements of the world came to be established (as I argue in Chapter 7), the great directional almanac then articulates more specifically how major aspects of life and culture were subsequently organized according to the directions of the world. In this respect it functions similarly to the sections of the Codex Vienna that describe how cult and polity were brought to specific regions of the Mixteca after the universal genesis (Boone 2000a, 2000b:89–96). This Borgia almanac, however, also includes cultural features like strife, war, blood sacrifice, and marriage, as well as polity, rulership, and cult. The fire drilling thereby becomes even more motivated, serving not just to create fire but to institute these other features as well.

Lords of the Half-*Trecenas*

A few almanacs are structured as compressed tables just like the great directional almanac in the Borgia, except that they divide the *trecenas* into two parts and treat each half-*trecena* separately. Rather than having four mantic cells, they have eight: two per *trecena* grouping. One almanac (Borgia 75–76), with its cognates, divides the *trecenas* into groups of seven and six days ($7 + 6 = 13$); the other divides the *trecenas* into eight and five days ($8 + 5 = 13$). Their iconography is only subtly directional, but the $7 + 6$ almanacs clearly contain directional gods. This group is discussed here because it is more directional than not, although further scholarship may reveal a more specific topical focus.

The $7 + 6$ division appears on the last two pages of the Borgia (Fig. 76), where the *tonalpohualli* is organized with respect to eight mantic cells over two registers on facing pages.⁴⁰ It begins in the lower right, reads to the left along the lower register, and then returns left to right along the upper register. The mantic cells function in pairs across facing pages to accommodate the days in a *trecena*. The beginning day sign

of the *trecena* is painted below the first mantic cell of each pair, and the six spacers that represent the second through seventh days appear within the cell; the eighth day sign of the *trecena* is then painted below the second cell, which contains the five spacers that fill out the *trecena* (sign + 6, sign + 5 = 13). The count jumps from cell to cell, as it does in the other compressed tables, but here there are six and five spacers alternating rather than the usual twelve. The “eastern” *trecenas* (1, 5, 9, 13, 17) are thus accommodated by the first two cells in the lower right, the “northern” *trecenas* (2, 6, 10, 14, 18) by the second two in the lower left, the “western” *trecenas* (3, 7, 11, 15, 19) by the third two in the upper left, and the “southern” *trecenas* (4, 8, 12, 16, 20) by the last two in the upper right.

In the Borgia, these half-*trecenas* are linked to enthroned deities that have braziers with offerings and other mantic scenes in front of them. The gods are virtually the same as the directional gods who are painted in the *tonalpohualli* in the Tudela (97r–124r) (Fig. 66), and the Tudela sequence has thus been used to reconstruct the destroyed parts of the Borgia. Cervantes de Salazar, who had access to a Tudela prototype, describes a similar almanac.⁴¹ In the Borgia, the gods are Tlaloc and Tonatiuh, Mictlantecuhlti and Tlazolteotl, Centeotl and Tlahuizcalpantecuhlti, and Malinalteotl and Macuiltonalli (Anders, Jansen, and Reyes García 1993:368–371). All are accompanied by a priest holding out a smoking incense pan, who is drawing blood from his ear; the blood flows into the mouth of the deities.

As Jansen (1986) has pointed out, the first of each pair and the second of each pair present parallel imagery. The first ones feature vegetal offerings added to the brazier, and the second ones feature hills with symbols of conflict and destruction (water-fire, shield-spears-banner, or the crossroads), which must signal times of war or conflict. The second cells of east and west have related or similar gods and identical mantic imagery, as do the first cells of north and south, which suggested to Jansen (1986) that the other (damaged) cells are also parallel, creating an east-west and north-south pairing that we saw in the great directional almanac just discussed. The point of this almanac is not only to pair opposite directions (east-west, north-south) but to distinguish between the first and second halves of each *trecena*. It is in the second half that conflict is fated.

A similar eight-part almanac in the Laud (9–16) like-

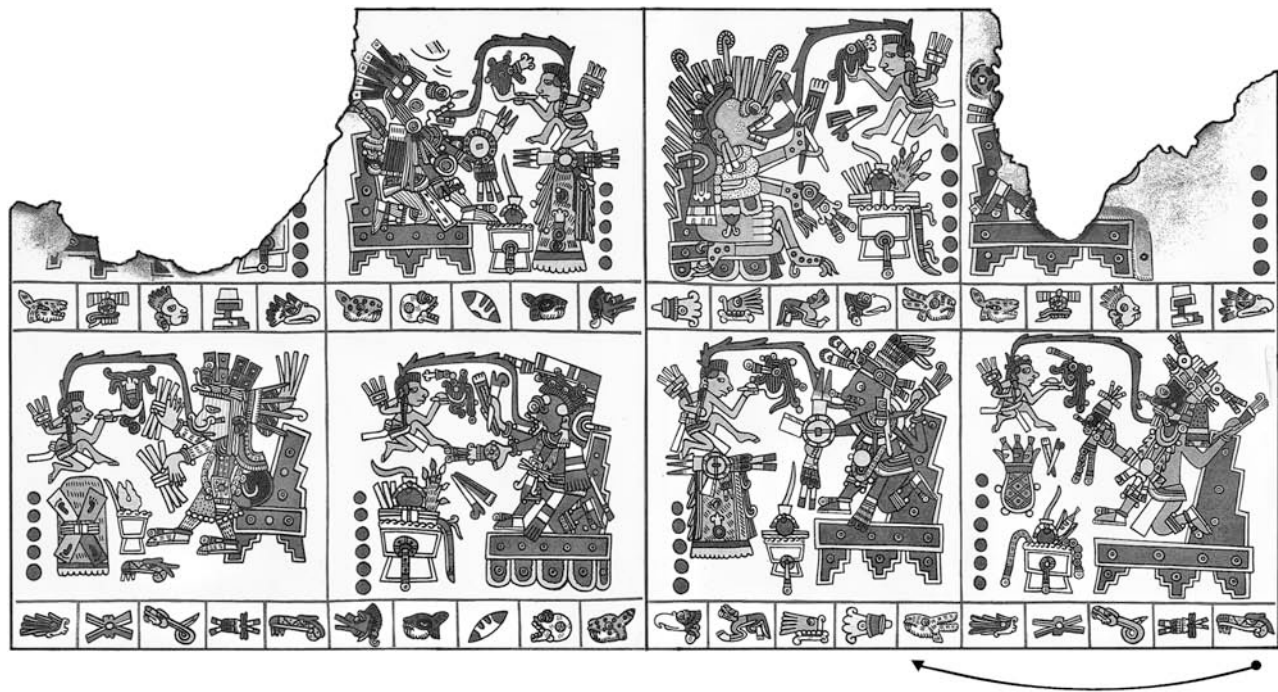


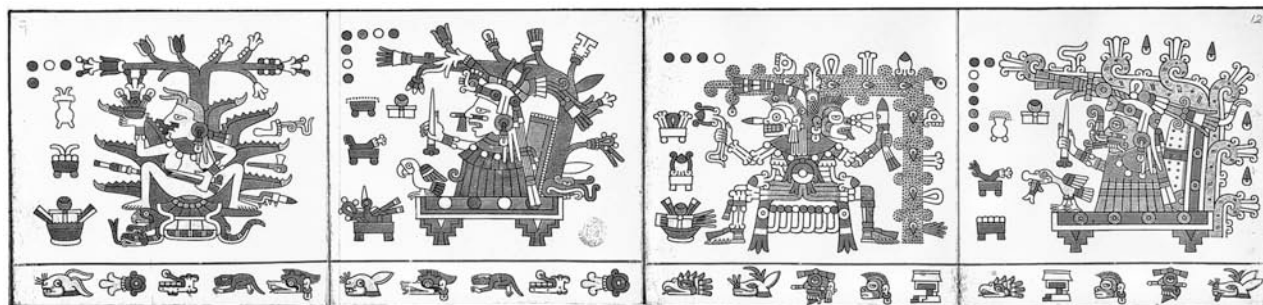
Fig. 76. Lords of the half-*trecenas*. Codex Borgia 75–76 (configured from Díaz and Rodgers 1993).

wise divides the *trecenas* into two parts, but this time the division is $8 + 5$ (Fig. 77).⁴² It reads from right to left. The eight mantic cells feature gods enthroned or seated under trees or bowers, with two cells (two gods) paired on facing pages per *trecena*. The first of each pair has the first day sign of the *trecena* and seven spacers, and the second has the ninth day sign and four spacers (sign + 7, sign + 4 = 13). The gods and fates of the first half of each *trecena* are positive: solar, rain, and agricultural gods (Xochipilli, Tonatiuh, Tlaloc, Centeotl) under flowered, rainy, or jeweled bowers. The gods and fates of the second half are more negative: Tlazolteotl, the gods of sacrifice and death (Ixquimilli, Mictlantecuhctli), and Mayahuel under bowers decorated with weapons, symbols of blood sacrifice, and skulls.⁴³ This pairs beneficial and hurtful forces for each *trecena*, although the beneficial forces govern eight days and the hurtful ones only five.

An iconographically and structurally identical almanac appears in the Porfirio Díaz Reverse (Fig. 78).⁴⁴ There the first pair and the last pair of mantic cells were on a now-lost previous page, so only the second and third pairs of cells remain. The remaining gods are

the same as those in the Laud: Tonatiuh and Ixquimilli on the bottom are the second pair, and Tlaloc and probably Mictlancihuatl on the top are the third pair. The calendrical count in the Porfirio Díaz Reverse is simpler than in the Laud, for there are no spacers; each pair is simply associated with the sequent day signs of a *trecena*: seven days with the first god of each pair, and six days with the second god. This division of the *trecenas* follows the $7 + 6$ pattern that we saw in the Borgia almanac just discussed (Fig. 76), which is described by the annotator of the Tudela; it does not follow the $8 + 5$ day division used in the Laud (Fig. 77). Before half of the almanac was lost, it covered the first four *trecenas* (or fifty-two days), which is the equivalent of one pass through the compressed table arrangement on Laud 9–16.

The function of these split-*trecena* almanacs is to focus meaning on units of time that are smaller than the *trecenas*, while still recognizing the importance of the *trecenas* themselves. They bring these smaller units into association with specific lords and fates; but by pairing contrasting (positive and destructive) forces, they still preserve the integrity of the *trecenas*.



Topical Almanacs

The calendar priests and diviners found the general-purpose and directional almanacs relevant for many facets of life, for the lords and forces in these presentations could be applied to practically any activity. The *tonalpohualli* organized into *trecenas* could have been consulted not only for birth and marriage but also for war, politics, travel, diplomacy, healing, commerce, agriculture, and a host of other activities—in short, for all realms of Aztec social existence. All-purpose almanacs tend to be the most prominent in the divinatory codices, and they form the core of the divinatory system.

But other almanacs targeted particular areas of life. We can now identify some as pertaining specifically to marriage, childbirth, travel, rain and agriculture, and the appearance and forces of Venus. Marriage almanacs speak to the happiness of a couple, the quality of the marriage, and the likelihood of children. The childbirth almanac describes the very process by which a child emerges into the world as a viable being. Travel presentations characterize journeys and potential hazards along the way and were of particular interest to merchants. The relatively few agricultural almanacs are devoted to the rain gods and to maize as the principal crop. The Venus almanac describes the destructive forces unleashed by that planet when it rises in the east. Very likely there are topical almanacs that pertain to other areas of life, but we have yet to establish their focus. These special-purpose almanacs target particular realms that are not specifically covered by the general-purpose and directional almanacs.

Marriage Almanacs

When the Franciscan friar Motolinia (1951:74) spoke of the five books the Aztecs had, he said that the third book pertained to dreams, illusions, superstitions, and omens, the fourth book to baptism and the naming of infants, and the fifth to “the rites, ceremonies, and omens . . . relating to marriage.” No codices wholly dedicated to marriage fates and ceremonies have survived, but individual almanacs that give marriage prognostications have. They come both as compressed tables and as simple lists. Always they present a male and female interacting with each other, sometimes also with children. They tell the potential couple whether their union will be happy and successful, challenging, difficult, or disastrous, and in what ways, usually by characterizing the man and woman as specific or generic supernaturals who act out their fates. Often the almanacs also foretell whether and how children will come into the union. Three kinds of marriage almanacs are found in the existing codices (Boone n.d.a).

Wedding Scenes We have already seen the first of these marriage almanacs as part of the great directional almanac on Borgia 49b–53b. There each of the four large mantic cells contains a simple scene of a male and female embracing within a structure and covered by the marital blanket; it is the scene of a marital union (Figs. 71, 72 no. 8). The man and woman have the coloring and costuming of particular deities who reside in specific locations, and it is their identity as gods and their physical situation in the different abodes that convey the quality of the marriage. For the *trecenas* associated with the east (Borgia 49b), solar beings within a jeweled and flowered structure signal prosperity and success. For the *trecenas* associated with the north (Borgia

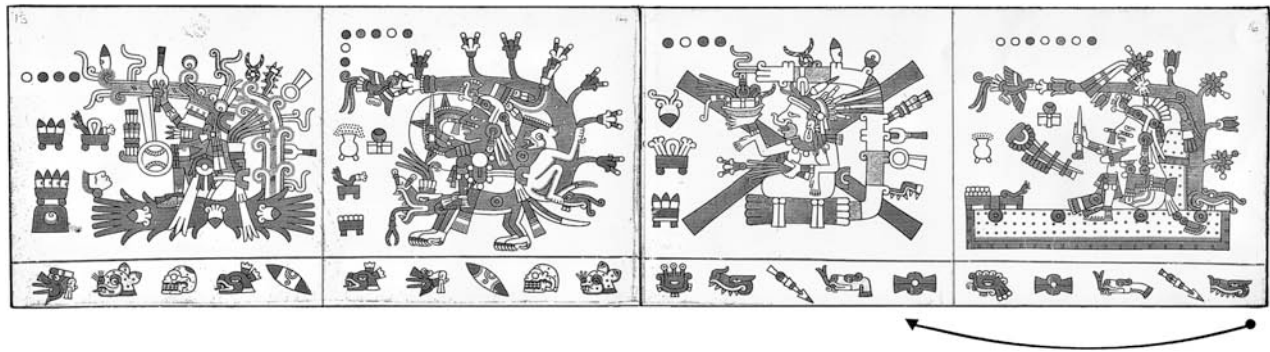


Fig. 77. Lords under bowers, according to the half-*trecenas*. Codex Laud 9–16 (configured from 1994 edition; reproduced with permission of Akademische Druck- u. Verlagsanstalt).

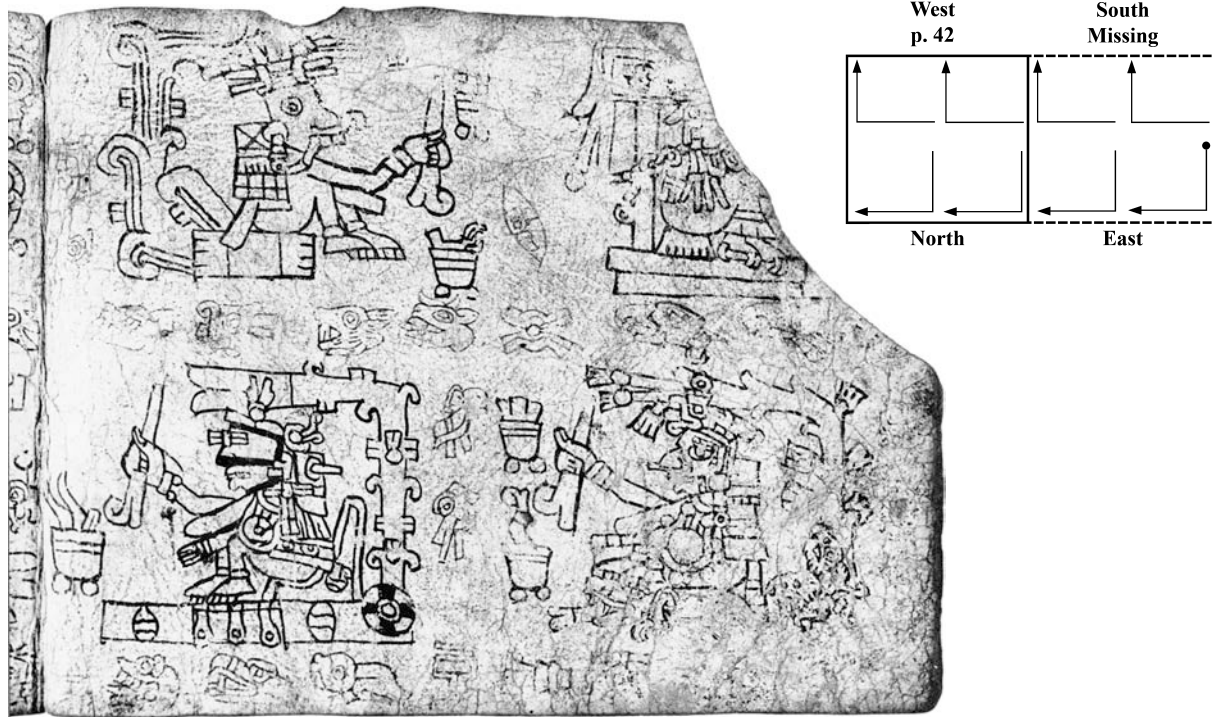


Fig. 78. Lords under bowers, associated with the day signs. Codex Porfirio Díaz 42. Photograph courtesy of the Biblioteca Nacional de Antropología e Historia, Mexico. Diagram by Danielle Pierce.

50b), Tlazolteotl joins with a Macuiltonalequi in or on a white mound with thorny flowers to characterize a less positive union, which will be fed by the blood of decapitated figures. The western *trecenas* (51b), with Chalchiuhtlicue and Tepeyollotl in a maize temple, promise success as fine as in the east. The southern *trecenas* (52b), however, are dire; marriage is the union of two death gods within a bone temple.

These four little scenes embedded within the larger directional presentation offer up marriage prognostications, perhaps with respect to the timing of the ceremony; considering the prosperity suggested by the eastern and western pairs, a couple would probably want to set the marriage date in an eastern or western *trecena*. Sahagún (1953–1982, bk. 3:40) noted that once a man and woman agreed to marry, they “sought a day of good fortune, . . . a sign of good disposition,” among which, he said, were Crocodile, Monkey, Reed, and Rain. Although the scenes contribute to the larger directional presentations, they could easily stand by themselves as an independent almanac that is organized as a compressed table.

The Six Marriage Pairs A roughly similar but more complex and iconographically richer almanac appears in cognate versions on Borgia 57 and Fejérváry-Mayer 35b–37b (Fig. 79).⁴⁵ This is also a compressed table like the directional almanac, organized as five passes of fifty-two days, but it divides the *tonalpohualli* into six divisions rather than four and ignores the *trecenas*. The spacers in the six mantic cells number 7, 7, 7, 7, 10, and 8, which means that the first four cells pertain to successive eight-day periods (sign + 7), and the last two cells to eleven days and nine days, respectively.⁴⁶ In each mantic cell a seated male and female supernatural manipulate offerings and symbols and interact with each other. They are complementary deities: male and female versions of Tonacatecuhtli (Lord of Sustenance), a pulque god and Mayahuel, male and female maize deities, the water gods Tlaloc and Chalchiuhtlicue, the flower/solar gods Tonatiuh/Xochipilli and Xochiquetzal, and male and female death gods.⁴⁷

Three of the pairs offer prognostications that are clearly positive: the gods of sustenance, maize, and water in the first, third, and fourth positions are associated with jewels and other symbols of preciousness and abundance. The last pair is dismal in the extreme:

between the death lords are a dying man and a coral snake. The other two pairs are slightly less dire but still ominous. The male and female pulque gods in the second position have vessels of flint knives and a jaguar between them (and in the Borgia they brandish a stone or obsidian ball and an axe), and they have coral snakes and a skull vase between them; the message seems to be one of mutual antagonism. The flower/solar lords Tonatiuh/Xochipilli and Xochiquetzal in the fifth position have turned their backs on each other and have turned over their offering vessels; this cannot signal a compatible, happy union, despite the precious bowl and descending quetzal between them in the Borgia.

At the top center of each mantic scene in the Borgia is a sun, moon, or sun/darkness symbol, which probably indicates positive, negative, and variable, or mixed, fates. The sun symbols occur with the three most positive prognostications, and the moon occurs with the death lords, but exact matches are not made with the two other couples. The antagonistic pulque gods, who lack any beneficial or positive signs, have the sun/darkness (variable) symbol. And the incompatible flower/solar gods have the sun symbol above them. This makes one suspect that these sun, moon, and sun/darkness symbols in the Borgia are not meant to summarize the scene below them, but to contribute additional mantic information that then becomes part of the whole prognostication. This topic is discussed below, for the sun, moon, and sun/darkness symbols reappear in the Borgia version of the third marriage almanac, which immediately follows on pp. 58–60.

The Combined Day Numbers This third variety of marriage almanac, which is found in the Borgia (58–60), Laud (33–38), and Vaticanus B (42b–33b), appears to be the principal type of its genre (Figs. 80–82).⁴⁸ It is composed of twenty-five mantic cells, presented side by side in one or two registers, and thus occupies considerable space in the codices. Both Juan de Córdova (speaking about the Zapotecs) and Motolinia (thinking of the Nahuas) indirectly mention the kind of information that it offers. The almanac concerns itself not with the 260-day count, as do the other two marriage almanacs, but with the day number coefficients, and it is one of the very few almanacs to describe day number fates explicitly. The day numbers are, of course, 1 through 13; the numbers in this almanac are 2 through 26, which

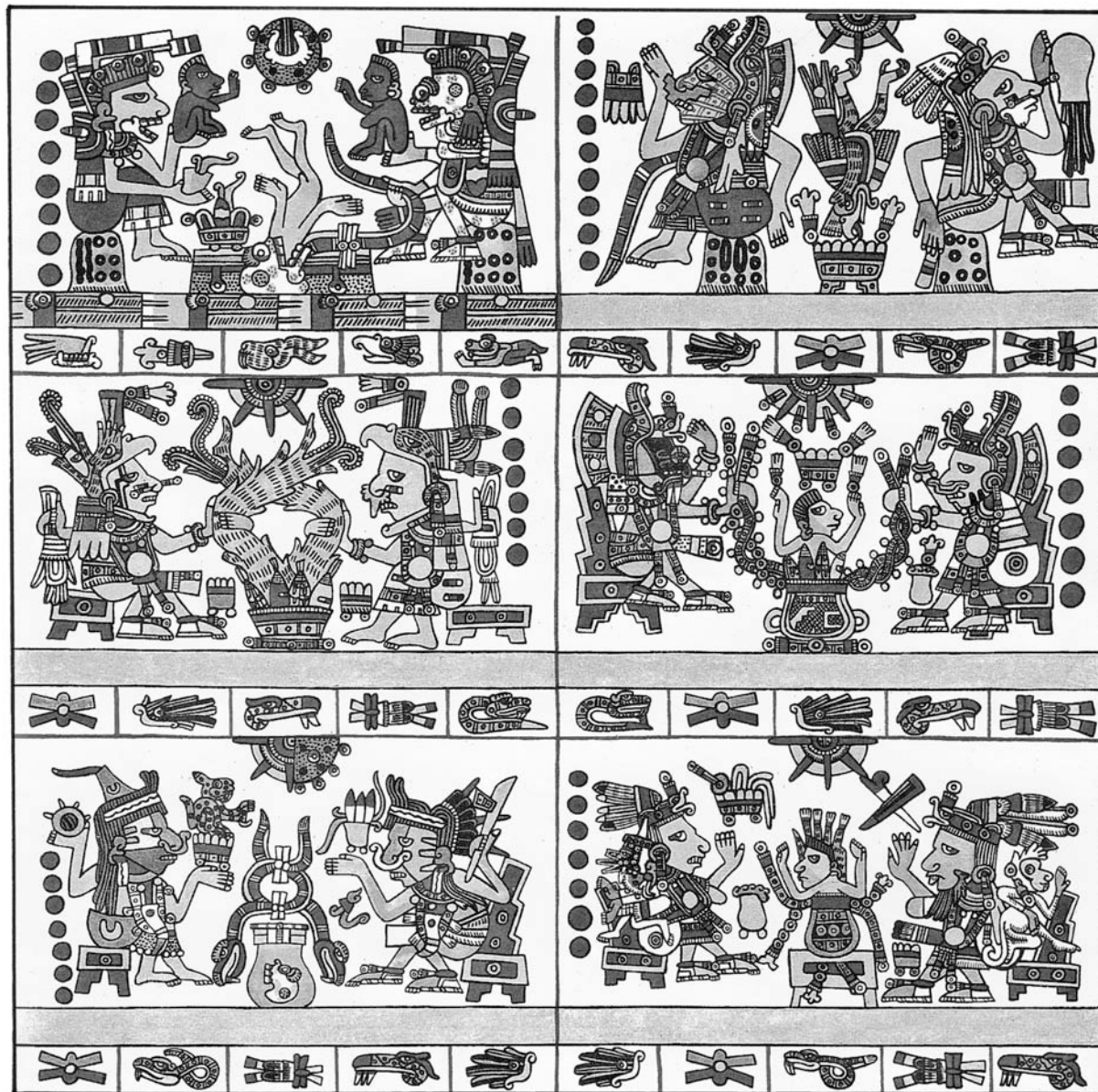
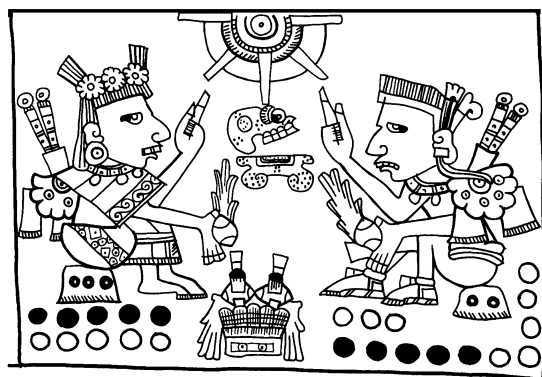


Fig. 79. The six marriage pairs. Codex Borgia 57 (from Díaz and Rodgers 1993).

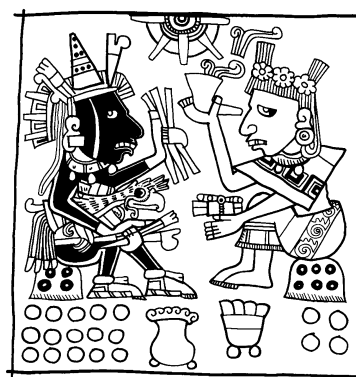
is the sum of the day numbers of two persons. Each of these combined numbers is presented in a separate cell along with a male and female and other prognosticatory elements.

The Borgia version of this almanac presents males and females costumed as specific supernaturals; they manipulate objects, gesture, interact with each other, and are accompanied by symbols, which together cre-

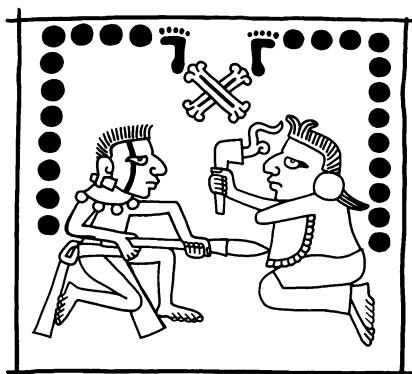
ate the augural message. At the top of most scenes in the Borgia are the sun, moon, or sun/darkness symbols seen in the almanac that immediately precedes it on Borgia 57. The cognate versions in the Laud and Vaticanus B are very similar to each other and distinct from the Borgia. They share imagery the Borgia does not have; they are iconographically simpler than the Borgia, with fewer decided supernaturals; and they lack the



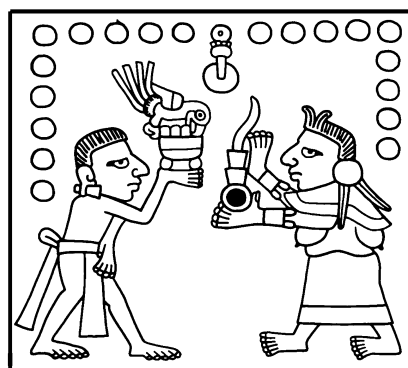
a



a



b



b



c



c

Fig. 80. Augury for the number 23, marriage almanac for the combined day numbers: a, Codex Borgia 59a; b, Codex Laud 34a; c, Codex Vaticanus B 33b. Drawings by Heather Hurst.

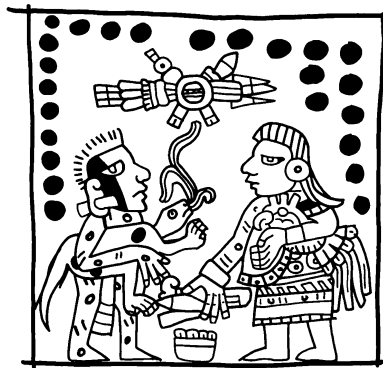
Fig. 81. Augury for the number 19, marriage almanac for the combined day numbers: a, Codex Borgia 58b; b, Codex Laud 36a; c, Codex Vaticanus B 35b. Drawings by Heather Hurst.



a



b



c

Fig. 82. Augury for the number 24, marriage almanac for the combined day numbers: a, Codex Borgia 59a; b, Codex Laud 34a; c, Codex Vaticanus B 33b. Drawings by Heather Hurst.

symbols at the top of each scene. The Borgia version thus stands apart as being richer and constructing its own version of the basic message.

At the very back of his Zapotec grammar, after he describes the calendar, Juan de Córdova (1987:216–217) explains that the fate of a potential marriage was based on the sum of the day numbers of the bride and groom.⁴⁹ A man born on 10 Serpent who wished to marry a woman born on 4 Grass would look to the fate associated with 14, for example. Córdova went on to say that the total was to be divided by two; if any number was left over (if the division was not exact), the couple would have a son. Next the original sum was to be divided by three, four, and then five; if any number remained after each division, other children would follow. Using this system, the sums of seven, eleven, thirteen, nineteen, and twenty-three promised the most offspring, and all the even numbers prevented sons. This preference for odd numbers recalls Motolinia's (1971:341) observation that odd-number sums were sought when someone in Cholula and its environs was being initiated as a lord (his birth day and initiation day would be added to achieve this odd number). But Motolinia indicated that someone born on an odd day might also have been married on an odd day and would then be initiated on an odd day. This pattern suggests that the odds were more beneficial than the evens when marriage was concerned.

We see this displayed in this marriage almanac. In the Borgia, all the odd totals except nine (divisible by three) have the sun disk at their top center, even though some of the scenes are otherwise negative (e.g., 23). The even-numbered totals have a moon (6, 18), a vessel with offerings (4, 16), or a sun/darkness combination (the rest). This holds regardless of the relevant scenes, which sometimes contradict the symbol. Although number 23, for example, has a sun disk in the Borgia, the man and woman have a skull and bone and a *cuanabxicalli* filled with hearts and blood between them and hold other bloody hearts (Fig. 80). The Laud and Vaticanus B versions also feature bones, and the man stabs his wife in the stomach (or is about to) with a sharp spear. The sun symbol in the Borgia may signal a good total for the birth of children, but other aspects of the scene urge the greatest caution.

More of these prognostications are clearly positive than are clearly negative, and many are ambiguous or

speak to one particular aspect of a relationship. The couple of number 5, for example, faces a flowering tree that bodes well, and the man and woman of number 19 offer precious objects to each other (a quetzal or parrot, a ball of rubber, etc.; Fig. 81). In contrast, a scorpion stands between the two people of 14, and the man has turned away; we can feel here the sting of a hurtful relationship. Number 24 presents a case of infidelity and deceit (Fig. 82).⁵⁰ The message is explicit in the Borgia, where a wife, who holds a quetzal to symbolize her worth, has caught her husband fondling a mostly nude woman; a shield-spears symbol states the obvious conflict. The message is subtler in the Laud and Vaticanus B versions: the woman still holds her quetzal, but the temptress is gone; her memory remains only in the lizard (a symbol of male sexuality?) that the man holds. The man speaks (lies, actually) to his wife in the Laud (his speech scrolls are like curls of excrement), but it is the lizard who speaks and tells the tale in the Vaticanus B; there a shield-spears symbol again emphasizes the conflict. The Codex Borgia consistently elaborates and embellishes the message of these marriage prognostications, as it does with so many of its almanacs.

These marriage scenes have more nuance and subtlety than simply indicating success or failure in a marriage. Objects appear and are manipulated meaningfully, and the couples pose and gesture. Unfortunately, we do not fully understand the symbolism of many objects and of most poses and gestures, which can vary somewhat from manuscript to manuscript. We can usually get the gist of the augury, however.

Birth Almanac

In the Vaticanus B, the birth almanac stretches out in the register just above the marriage almanac. It does not foretell the life fate of a newborn, for the general-purpose and directional almanacs yield those prognostications. Rather, this almanac focuses on the process of birth itself and the first moments of an infant's life. Cognate versions appear in three codices, where they are located near the beginning, following major general-purpose almanacs, or logically near marriage almanacs (see the Appendix). In the Borgia (15–17a), it directly follows the nine Lords of the Night near the beginning of the codex: coming after the *tonalpo-*

hualli in extenso, the day sign patrons, and the Night Lords (all basic, general-purpose almanacs). In the Fejérváry-Mayer (23a–29a), it opens the second side of the codex, running along the upper register; and in the Vaticanus B (33a–42a), it follows the patrons of the twenty day signs and runs above the marriage almanac. The versions are very similar from manuscript to manuscript.⁵¹

The birth almanac is a twenty-day almanac repeated four times (eighty days in all), with the material organized as a grouped list (Fig. 83). The complete presentation has four sequential sections, each covering twenty days and devoted to one aspect of birth. These are the four major events of childbirth: the birth itself, the presentation of the child, the manipulation (cutting?) of the umbilical cord, and nursing (Fig. 84). Each section has five scenes or mantic cells involving an infant and deity, with four days to a scene. The Borgia pictures all the day signs, but the Fejérváry-Mayer and Vaticanus B depict only the first sign for each scene and replace the others with spacers.

The parallel scenes in the first section very likely pertain to the painful action of birth, when the child comes into the world as a living, breathing human. The codices represent this by picturing a deity piercing the eye socket (occasionally another part) of an infant, who is represented by either a diminutive figure or only a head. This enigmatic imagery might seem unrelated or even antithetical to birth, but it surely should be read metaphorically. They are superficially similar to depictions in the Maya Codex Madrid of gods carving idols and masks using axes and bone awls.⁵² The piercing in the Mexican almanacs may well refer to the Aztec understanding that humans were animated by having been breathed and bored by the creator couple. When the midwife prepared to bathe a child shortly after it was born, her oration included the statements: “Thy mother, thy father, Ome tecuhtli, Ome ciuatl have sent thee. Thou wert [breathed], thou wert bored in thy home, the place of duality.”⁵³ It was through this breathing and boring that a child's *tonalli* or soul entered its body while still in the womb (López Austin 1988, 1:208–209; Furst 1995:64–65). Anders and Jansen (1994:251) interpret this piercing scene in the almanacs as the divine act that opens a child's eyes and teaches it to see, know, reason, and live; and because

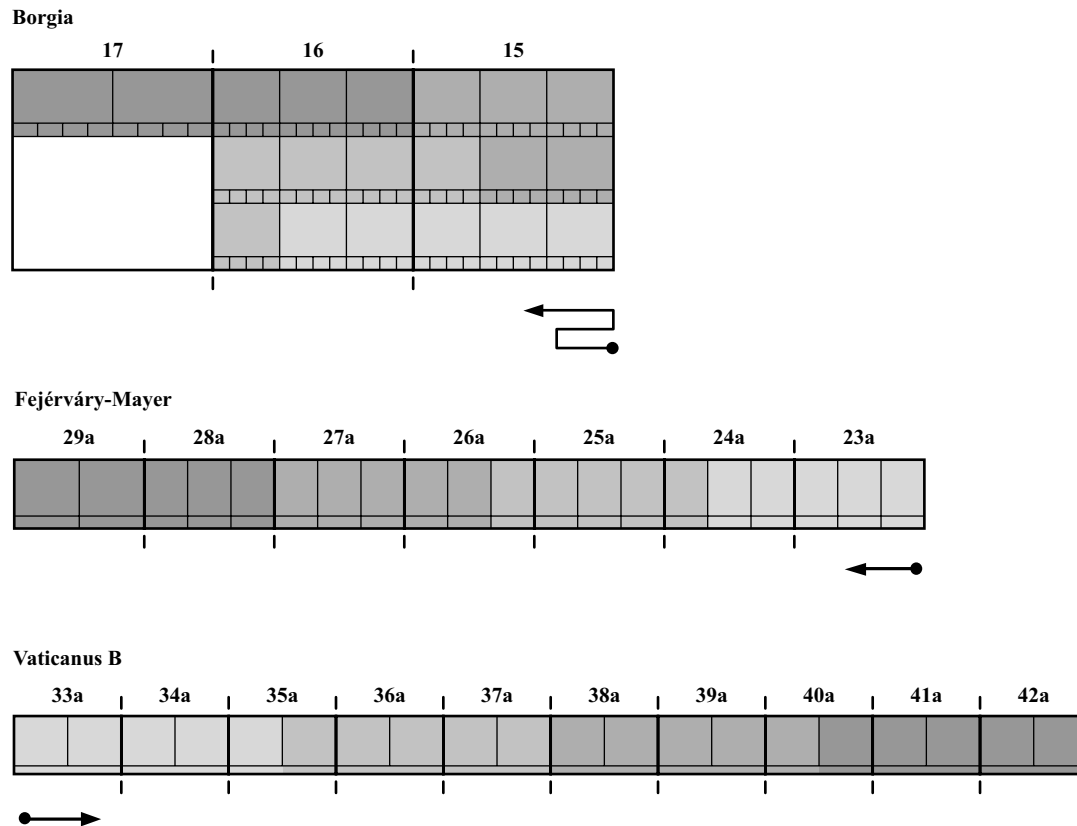


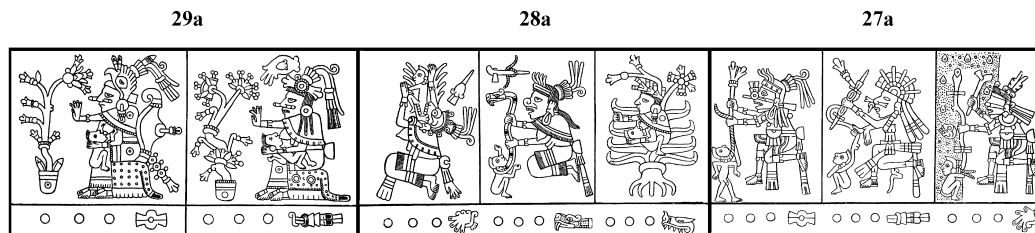
Fig. 83. Structure of the childbirth almanacs: Codex Borgia 15–17a, Codex Fejérváry-Mayer 23a–29a, Codex Vaticanus B 33a–42a. Diagrams by Markus Eberl.

a bone awl is used, life will involve penitence. The sharp, piercing action may also refer to the pain of the birth act.

The second, third, and fourth sets of scenes are less ambiguous and clearly related to early infancy. The second is the presentation of the child, held aloft by a supernatural, which parallels the midwife's act, after washing, of raising up the child four times to the gods (Sahagún 1953–1982, bk. 6:202–203). The third set involves the umbilical cord, which a deity stretches and pulls away from the child; the cord ends with a symbolic element, such as a flower or jewel. In the Fejérváry-Mayer (Fig. 84), several of the gods also hold knives with which to cut the cord. The fourth set represents the infant, now fully born, nursing at the breast of one of the goddesses.

Within each set, the five scenes are dominated by a supernatural who controls that aspect of a child's birth

(Table 11). For anyone born on one of the first four day signs (Crocodile, Wind, House, Lizard), the maize/flower/solar lords Centeotl or Xochipilli would control the birth, Xochiquetzal or Centeotl would present the child, Macuilxochitl or Xochipilli would manipulate the umbilical cord, and Mayahuel would suckle the child.⁵⁴ A theme of vegetation and abundance thus governs the birth process for those fortunate to have these day signs. Those born under the third group of signs (Water, Dog, Monkey, and Grass), however, are ill favored; the birth was controlled by the gods of death and blood sacrifice and was probably a difficult one, if the child survived at all. The birth almanac, so similar in its three extant versions, characterizes the process of birth as being differentially managed by the gods according to the timing of the birth.



Travel

Four almanacs, three in the Fejérváry-Mayer (30a–32a, 35a–37a, 38a–40a) and one in the Borgia (55), pertain to journeys.⁵⁵ They all are grouped lists that associate the twenty day signs with six travelers. Many of the figures hold the circular feathered fan and the long walking staff of merchants, and they use tumplines to carry their cargo in great parcels on their backs, leaning forward under the strain. Since the Fejérváry-Mayer has the greatest concentration of such travel almanacs, Miguel León-Portilla (1985:9–10) proposed that the Fejérváry-Mayer was a divinatory codex belonging to the *pochteca* or long-distance merchants, although the birth almanac it contains suggests a wider audience that at least covered the merchants' families. Certainly the Fejérváry-Mayer focuses more on travel than do the other extant codices, which barely mention this aspect of life.

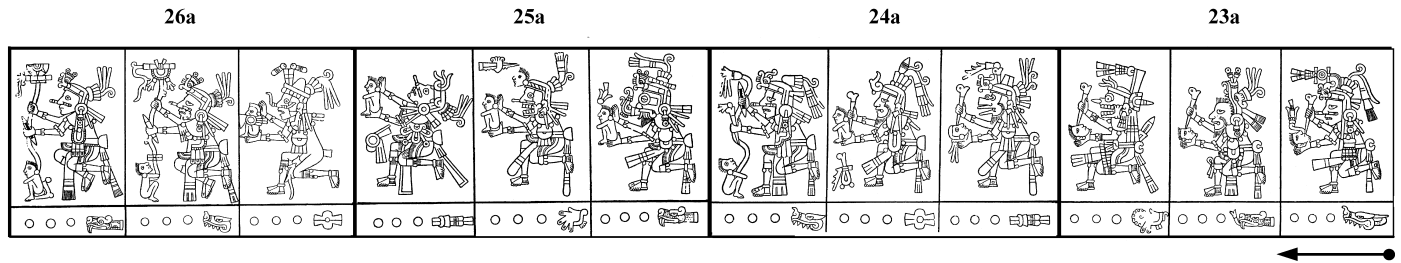
Two of the almanacs (Borgia 55 and its cognate on Fejérváry-Mayer 30a–32a) are discussed in Chapter 4 in relation to the structure of grouped lists (Figs. 37, 38). The other two follow one another in the Fejérváry-Mayer (35a–37a, 38a–40a). They are organizationally and calendrically very similar, but their iconography, and thus their message, varies (Fig. 85). Both arrange the twenty days irregularly with respect to the six scenes, and both group the days the same way: the first three signs with the first scene, and the other signs in groups of two, four, five, four, and two. Quetzalcoatl, patron of merchants, opens the first of these almanacs.⁵⁶ The second (Fig. 85) opens with an enigmatic scene of a man presenting a small figure to a woman, perhaps a prelude to his journey. The scenes that follow characterize a person's journey as being blessed or challenged in different ways.

Sahagún (1953–1982, bk. 9:9, 33) records that the days 1 Serpent, 1 Crocodile, 1 Monkey, and 7 Serpent

were good days on which to begin a journey and that 1 House and 7 House were favorable days to return. Indeed, 1 Serpent was called “the straight way,” and roads were named “serpent” because they were long and winding (Sahagún 1953–1982, bk. 9:9–11, bk. 11:269). He also notes that favorable days for merchants' banquets were 1 Crocodile and 7 Monkey. These favored days do not all appear with positive scenes in the Fejérváry-Mayer almanacs, however. Crocodile and House are associated with Quetzalcoatl in the first almanac, which makes them favorable; but both almanacs associate Serpent with scenes of trouble en route: the first depicts a coral snake tied around and thereby blocking a bent road, and the second pictures a traveler tripping over a large stone while being shot with an arrow, his bloodletters and his mushroom offering now broken (Fig. 85). Neither scene reflects the beneficial status that Sahagún seems to accord the Serpent day sign, and it may be that only 1 Serpent and 7 Serpent carry the benefit; the other days may be “the serpent, the road of stumbling,” mentioned by Sahagún (1953–1982, bk. 11:269). The almanacs also link Monkey to travel woes: a porter is attacked by rats and shot with arrows (in the first almanac), and an armed traveler pauses at a stone to decide which fork in the road to take (in the second almanac). In these two travel almanacs, the most favorable prognostications appear with the days Crocodile, Wind, and House (first scene), Death, Deer, Rabbit, and Water (third scene), and Eagle, Vulture, Motion, and Flint (fifth scene).

Rain and Agriculture

Although agriculture, and more specifically maize agriculture, was a fundamental concern of Postclassic Mexicans, the surviving codices contain relatively few almanacs devoted to this topic. It may simply be that the sample is skewed (lost books may have contained agri-



23a

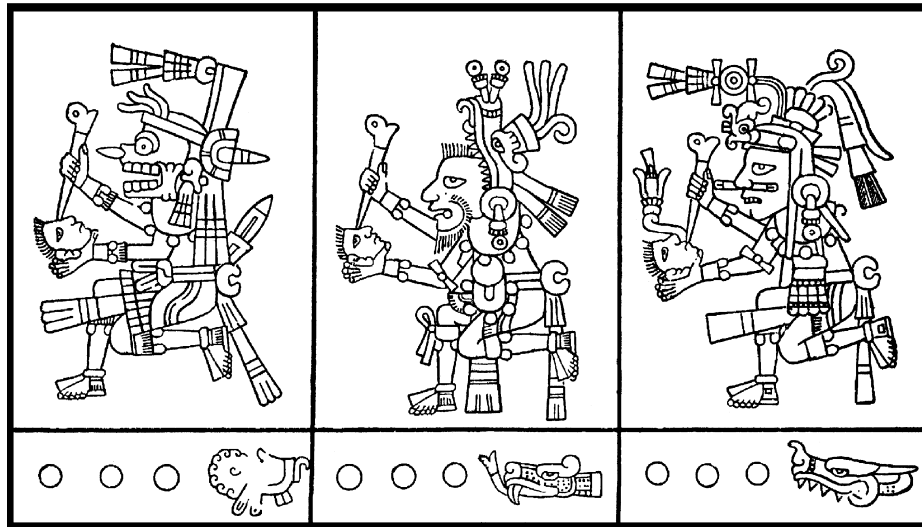


Fig. 84. Childbirth almanac, Codex Fejérváry-Mayer 23a–29a, and detail of the first section pertaining to the birthing process. Drawing configured from Seler 1901–1902.

Table 11. PATRONS OF THE BIRTH ALMANAC: BORGIA 15–17A, FEJÉRVÁRY-MAYER 23A–29A, VATICANUS B 33A–42A

	PIERCING BIRTH	PRESENTATION OF CHILD	UMBILICAL CORD	NURSING
First four signs	Centeotl, Xochipilli	Xochiquetzal, Centeotl	Macuilmochitl, Xochipilli	Mayahuel
Second four signs	Cipactonal	Tlaloc	Tonatiuh	Tlazolteotl
Third four signs	Mictlantecuhtli	Mictlantecuhtli	Ixquimilli	Mictlancihuatl
Fourth four signs	Quetzalcoatl	Tlahuizcalpantecuhtli	Xipe Totec	Chalchiuhtlicue
Fifth four signs	Macuilmochitl, solar or moon god	Mixcoatl	Macuiltonalequi, Tezcatlipoca	Xochiquetzal (goddess with turtle shell)

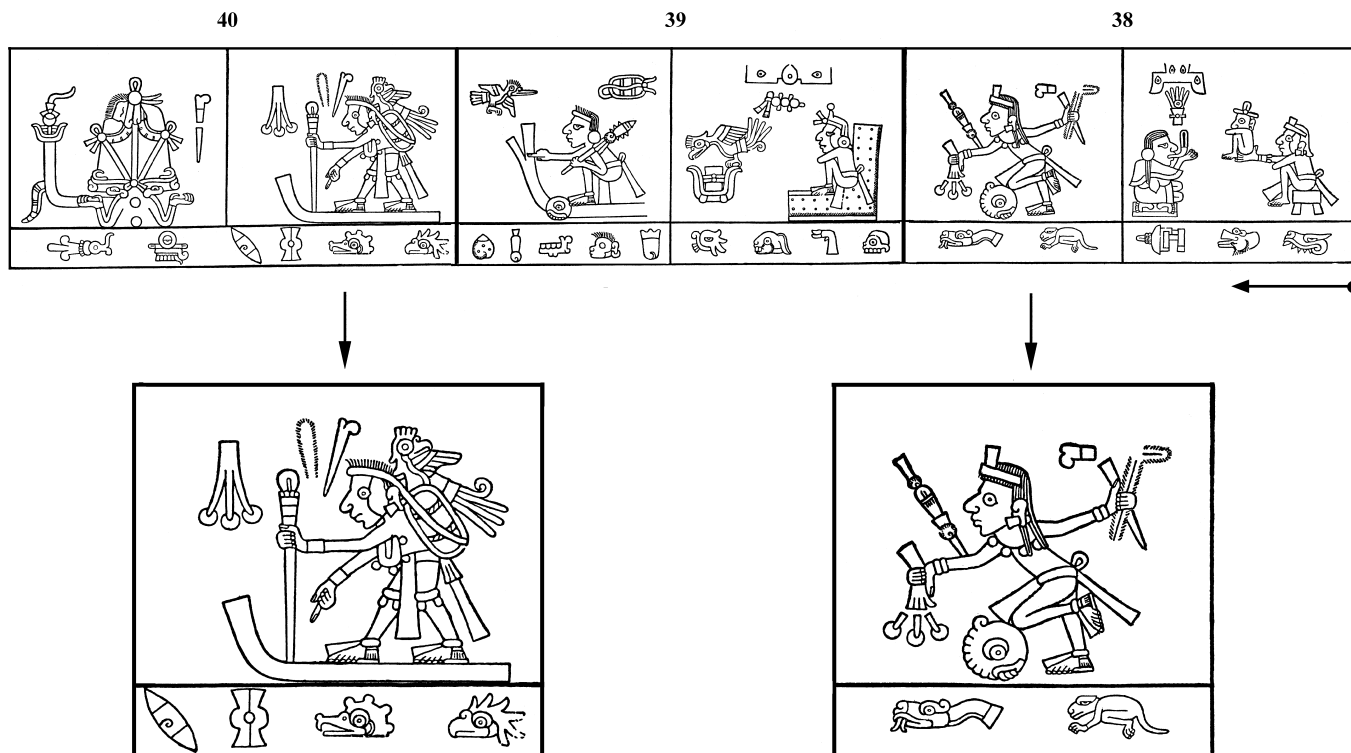


Fig. 85. Travel almanac: the day signs arranged according to six scenes, Codex Fejérváry-Mayer 38a–40a (configured from Seler 1901–1902).

cultural almanacs in abundance), or it may be that the farmers and their advisors used the general-purpose and directional almanacs for crop auguries and planting times. Seven almanacs in the extant codices do focus specifically on agricultural concerns. These refer to soil preparation, rainfall, and the well-being of maize, the principal staple of their diet. The seven are scattered in four codices (Borgia 27, 28; Fejérváry-Mayer 33a–34a; Laud 23; Vaticanus B 12, 43–48, 69). Five of these are distinct almanacs, having their own individual structure, calendrics, and iconography; two are cognate versions of the same almanac (Borgia 27 and Vaticanus B 69). Most focus on the gods of rain or water, but one pertains more to preparing the fields (Vaticanus B 12), and one concentrates on the maize plant itself. I briefly discuss the maize plant first, before concentrating on the rain almanacs.

The Maize Plant The maize almanac on Fejérváry-Mayer 33a–34a is a particularly exquisite presentation:

compositionally balanced, iconographically rich, and graphically subtle. It features the personified maize plant under the control of four deities (Fig. 86, Plate 2). It is structured as a grouped list of twenty day signs associated with four scenes, with five days per scene. The first of each group of five days is depicted, followed by four spacers.⁵⁷ The count begins not with Crocodile but with Movement, which is located not near the spacers in the blank area of the scene but in the watery ground beneath the seated water goddess (Chalchiuhtlicue). She supports and protects a young maize plant, personified as a man. He sits securely on the ground, and red roots grow down from his rump into the wet soil. A cloudy bower rises out of the top of Chalchiuhtlicue's head (or up behind her), and an arm extending from it holds out a vessel from which water pours; raindrops fall from above, and the maize leaves are bent over by the downpour. This first scene thus describes how Chalchiuhtlicue brings the necessary waters to the young maize. Clustered offerings, including a ball of

rubber and kindling, are to be presented during these days.

The scene in the next cell warns of hazards, for the day sign Wind brings winds that threaten to uproot the plant. To illustrate this, the personified maize plant leans forward with his rump slightly off the ground, although the roots (and perhaps the richly clothed man) still hold him in place. He is painted white and has on his torso a dotted concentric spot seen elsewhere on funerary bundles (e.g., Laud 44a); this tells us that the maize is close to dying. The sky is mixed cloudy and dark, and a precious digging stick has been broken. Offerings of rubber and kindling are to be made again. These offerings must have been efficacious, because the next cell (with the next four days) shows the maize as fully ripe and now personified as a jeweled female; roots hold her firmly to the ground. Tlaloc supports and nurtures her; again offerings of rubber and kindling are made. The final scene describes the final dangers facing the now-ripe maize, due to vermin and the sun. The maize plant, here male and painted red, is fully uprooted. It is further threatened by a raccoon, two parrots, and two dark, longer-beaked birds (crows?) who hover around. The sun god who touches but does not embrace the maize plant is armed with spears, which suggests that the sun has attacked the plant and left the ground parched. No offerings can restore the maize now.

This insightful little almanac characterizes the growing cycle of the maize plant as being both nurtured and damaged by natural events and supernatural action. We see firsthand how the maize is at the mercy of these forces, and we note how human offerings are demanded to help it along. The almanac tells when the greatest dangers lie and when offerings will be the most efficacious.

The Rain Gods Most of the other agricultural almanacs focus on manifestations of the rain god as the principal instrument that will assure a good crop. On Laud 23, Tlaloc is surrounded by the twenty day signs, in a corporeal and diagrammatic presentation in the manner of other body almanacs. A rain god almanac also closes one side of the Vaticanus B (43–48), where the 260 days of the *tonalpohualli* are arranged, as a compressed table, with respect to six rain gods accompanied by sky bands

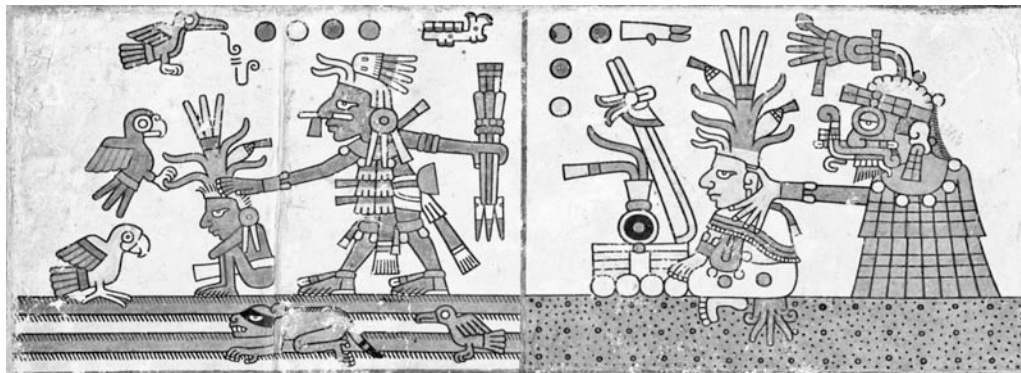
and other symbols that foretell the growth and destruction of the maize. This is a 5×52 almanac, but not one organized according to the *trecenas*. Instead the first cell is associated with eight days (sign + 7 spacers) and the other cells with four (sign + 3), twelve (sign + 11), four (sign + 3), fourteen (sign + 13), and nine (sign + 8) days, respectively.

The Five Rains and Maize Although the other rain almanacs represent variations on organizational schemes that have been seen before, the two final rain god almanacs are calendrically anomalous, and their peculiarities have led to varied interpretations. One of the almanacs appears in cognate versions on Borgia 27 and Vaticanus B 69; the other is only on Borgia 28 (Figs. 87 and 88, Plate 8). Both almanacs divide their pages into five major cells, four at the corners and one in the center, similar to the graphic organization of Aubin No. 20.

The iconography is fairly clear. In each cell a rain god stands well above a ground line that pictures the progress of the maize crop. His head is thrown backward so that his face looks to the sky, and he holds a curved staff and serpent in one hand and a rain-god effigy vessel in the other. Rains of different quality pour down from these instruments and onto the maize below. The imagery recalls a passage in the *Historia de los Mexicanos por sus pinturas* (Garibay 1979:26), which describes the source of beneficial and harmful rains. It tells how Tlaloc and Chalchiuhtlicue were created and then says:

Of this god of water it is said that he has a dwelling of four rooms, and in the middle of which [is] a large patio where are four large tubs of water. The [water in] one is very good, and from this it rains when the grains and seeds are nourished, and it comes at a good time. The other is bad when it rains, and with the water cobwebs are created on the grains, and they mildew. Another is when it rains and it sleets/hails; another is when it rains and [the seeds] do not fill out, and they dry up.

And in order to make rain, this god of water created many small assistants who lived in the four rooms of the house, and they had containers in which they took water from those tubs and [had] rods in their other hand. And when the god of rain ordered them to go to irrigate some places, they took



their vessels and rods and irrigated with the water that was mandated. And when it thunders, [that] is when they hit the vessels with their rods. And when the lightning comes, it is from that which is within or a part of the vessel.

This passage is an apt description of the scenes on Borgia 27 and 28. Here the rain gods number five rather than four, but they carry their vessels and their staffs and bring harmful as well as beneficial rains, which pour down onto the maize fields below. The Borgia painter, like the author of the *Historia*, characterizes both the distinctive rains and their particular effects on the crops. Sky bands of sun rays, clouds, and darkness indicate sunny and cloudy days and night.

It is the aberrant calendrical content of the two almanacs, not the iconography, that has led to differing interpretations. The scenes in both almanacs are associated not with the usual day signs or *trecena* signs but with specific day names and year names. Day names and year names are uncommon in the almanacs of the Borgia Group, which generally feature the twenty day signs or the *trecena* signs without indicating the coefficients (although in *trecena* presentations the day coefficients can be called up easily enough); the great directional almanac on Borgia 49b–53b (previously discussed) is a notable exception. Of course, the Aztec almanacs (i.e., Borbonicus and Tonalamatl Aubin; Figs. 46 and 47) name the days with number and sign, but it is rare to have only a few specific days and years targeted. The presence of these day names and year names suggests that these almanacs operate differently from most of the others and compels scholars to link the day dates and year dates together.

Although Seler (1963, 1:258–265) described both as rain almanacs, he linked the calendrics of Borgia 28 to the movements of the planet Venus. More recently, Anthony Aveni (1999) and Victoria Bricker (2001) have developed this Venusian model further, applying it to both almanacs and thereby locating the almanacs in real time.⁵⁸ Building on their work, Christine Hernández (2004, n.d.; Hernández and Bricker 2004) has shown that the day and year dates can be combined to reference days early in the planting season between 1467 and 1506.

The cognate almanac (Borgia 27 and Vaticanus B 69) is the more straightforward of the two (Fig. 87).⁵⁹ Its four corner cells predict the fate of maize under different conditions in reference to a year date and a day date; the fifth cell in the center is undated. The almanac progresses in a counterclockwise track, beginning in the lower right. Although the Borgia is the more symbolically elaborate presentation, the two versions share a basic iconography, which can be summarized as follows:

- yI Reed, 1 Crocodile: black Tlaloc with crocodile helmet, above earth crocodile from which maize grows well; beneficial water pours down; the sky is cloudy.
- yI Flint, 1 Death: yellow Tlaloc with skull helmet, above stony patches of maize being ravaged by grasshoppers; cutting (marked by axes) or harmful water flows down; the sky is sunny.
- yI House, 1 Monkey: blue Tlaloc with possum (?) helmet above watery ground from which maize grows well; beneficial water pours down; the sky is cloudy.
- yI Rabbit, 1 Vulture: red Tlaloc with macaw helmet

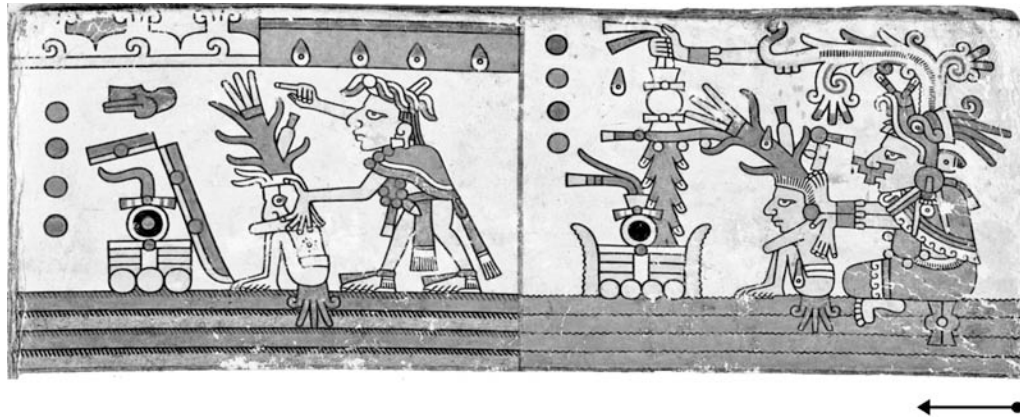


Fig. 86. Maize plant almanac: the twenty day signs beginning with Movement, Codex Fejérváry-Mayer 33a–34a. Photograph courtesy of the National Museums Liverpool.

above a parched field where mice or rats devour the corn; harmful water flows down; the sky is sunny. Center: Striped Tlaloc (as a sacrificial victim) with his typical trapeze-ray headdress, above two goddesses with jeweled (?) headcloths (Chantico or Tonacacihuatl?); the shield-spears-banner symbol and a skeletal figure characterize the destructive water that flows down; the sky is night and has the sun/darkness symbol (a variable fate?).

This symbolism clearly describes periods of clouds, beneficial rain, and maize growth (yī Reed and yī House), which alternate with periods of sun, harmful rain, and maize destruction (yī Flint and yī Rabbit). The conflict and death of the central section may in some way pertain to all.

Since Seler's time (1902–1903:281, 1963, 1:257–261) scholars have associated these four cells with the cardinal directions, the fifth being the center. Although directional references may not be uppermost iconographically, the calendrical structure does fit the directional system described for the Zapotecs and seen on Fejérváry-Mayer 1 and partially in the Tudela. On Fejérváry-Mayer 1 (Fig. 65, Plate 6) the twenty *trecenas* are associated in consecutive groups of five with the four directions. This means that on Fejérváry-Mayer 1, as here, both the day 1 Crocodile and the year 1 Reed are in the east, which is a place of fertility: Crocodile begins the *trecenas* of this quarter, wherein Reed appears as both a *trecena* sign (the last of the quarter) and a year

sign. In the same manner, 1 Death and yī Flint are in the north, a place of dryness; 1 Monkey and yī House are in the west; and 1 Vulture and yī Rabbit are in the south, although the mantic characteristics of the west and south in the Fejérváry-Mayer do not match those in the Borgia.

The days 1 Crocodile, 1 Death, 1 Monkey, and 1 Vulture are the first days of the first, sixth, eleventh, and sixteenth *trecenas*, which effectively divide the *tonalpohualli* into four quarters of sixty-five days. The Zapotecs called these sixty-five-day periods *cocijos*, after their name for the rain god, and considered them the principal divisions of the ritual year.⁶⁰

The years 1 Reed, 1 Flint, 1 House, and 1 Rabbit are the first, fourteenth, twenty-seventh, and fortieth years of the fifty-two-year cycle, which divide that cycle into quarters. As Anders and Jansen (1993:292–293) note, Francisco de Burgoa (1989, 1:289) tells how the fifty-two years are divided into quarters, with thirteen consecutive years in each quarter, and each quarter associated with a cardinal direction. Burgoa explains that eastern and western years are favorable and healthy, times of growth and generation; that northern years are variable; and that southern years are excessively dry and hot, leading to hunger, pestilence, and war. His account reflects this rain god almanac well. Each scene in the Borgia and Vaticanus B, therefore, is linked to one quarter of the *tonalpohualli* and to one quarter of the 52-year cycle.⁶¹

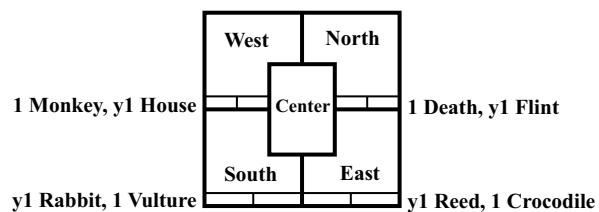
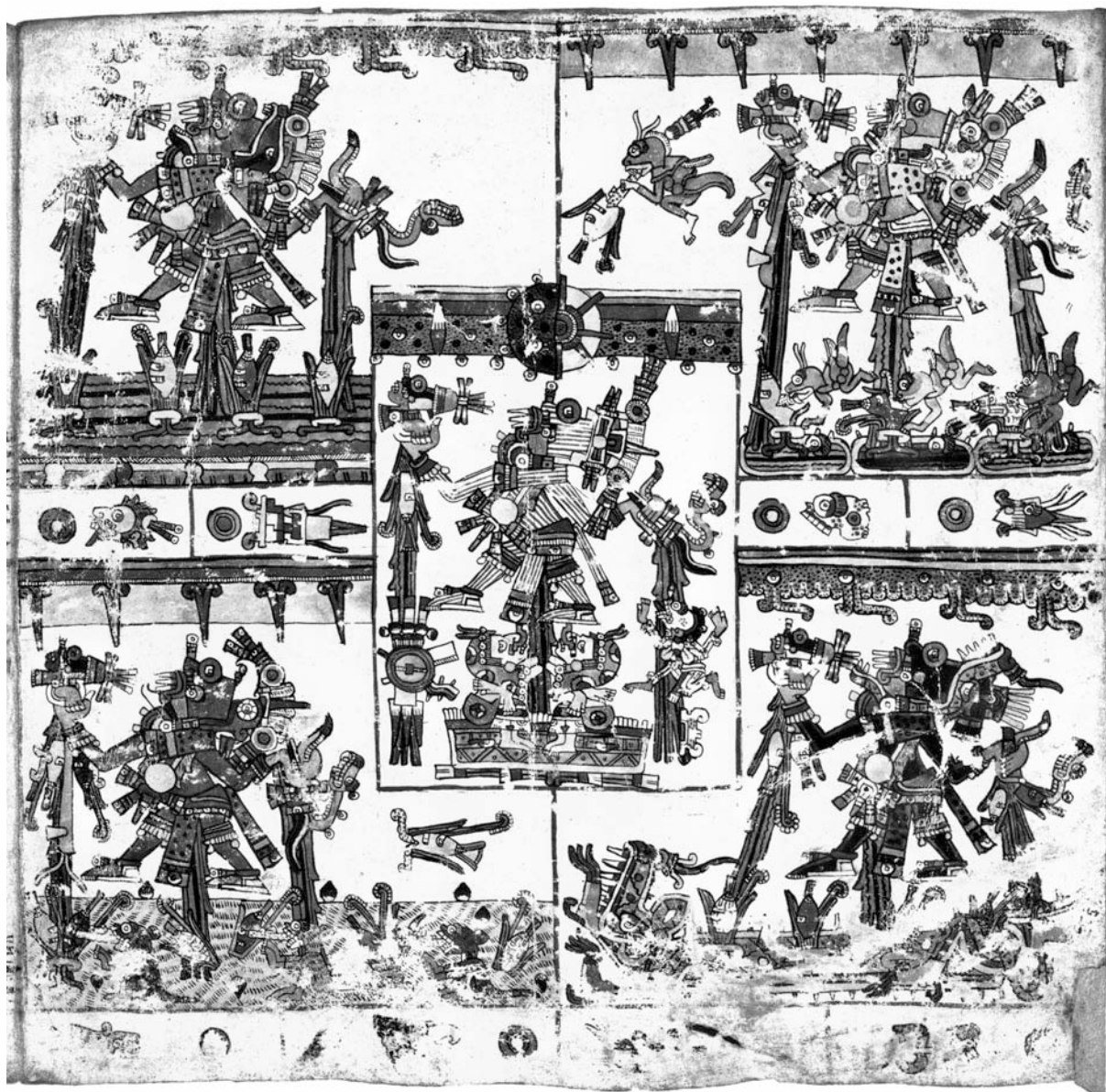


Fig. 87. Rain god almanac: the rains according to the quarters of the *tonalpohualli* and 52-year cycle, Codex Borgia 27. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.

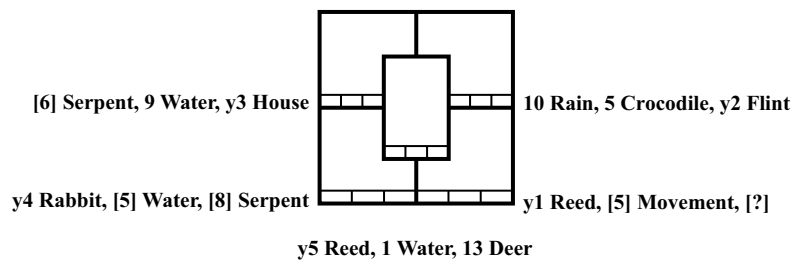
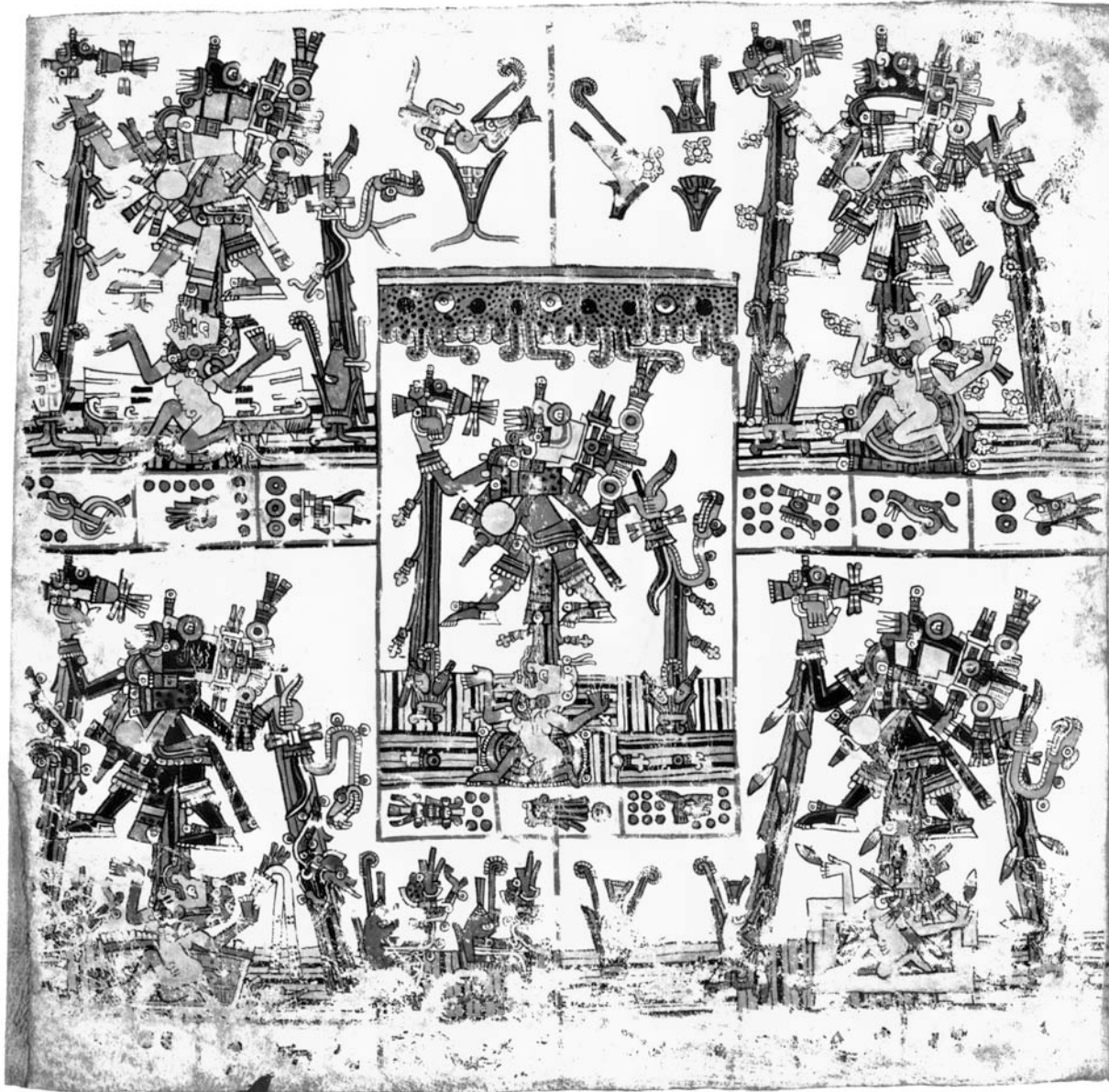


Fig. 88. Rain god almanac: five rain gods according to sequential years, Codex Borgia 28. Photograph © Biblioteca Apostolica Vaticana. Diagram by Markus Eberl.

An extra layer of meaning is added when the year dates are combined with the day dates. Aveni (1999: S9–10) has demonstrated that the first combination, y1 Reed d1 Crocodile, could refer to March 26, 1467, a day on which Venus and the sun rose at the same time (an event that was not observable but calculable); Bricker (2001:S39) also has noted that Venus last appeared as Evening Star that night. Using this date as a starting point, Hernández (2004, n.d.; Hernández and Bricker 2004) has demonstrated that all the year-day combinations can yield specific days in mid- to late March coming at thirteen-year intervals between 1467 and 1506 (Julian). These dates fall just before the commencement of the planting season in central Mexico. Thus, the almanac links the maize auguries for each quarter of the 52-year cycle to specific days that usher in the planting season at the beginning of each quarter.

The following almanac on Borgia 28 is iconographically and structurally similar but calendrically more complex (Fig. 88). Five Tlalocs reappear; they all wear the same costume and distinctive headdress as the central Tlaloc on Borgia 27, but their body and face coloring reflects the guises of different deities.⁶² From all five, water flows down on maize growing in a chinampa and upon a goddess enclosed in a symbolic vessel; the goddess and vessel together probably characterize the land.

All five cells have one year sign and two day signs. The years are consecutive: 1 Reed in the lower right leads around counterclockwise (2 Flint upper right, 3 House upper left, 4 Rabbit lower left) and then to 5 Reed in the center. The days, however, do not follow a discernible, canonical pattern or mark regular divisions of the 260-day cycle, as do those in the previous almanac. The calendrical situation is further complicated because the days and years along the left and bottom edges of the page are almost all worn away. The years can be reconstructed because they follow a regular pattern, but the day signs do not; and different scholars have reconstructed them differently.⁶³ Bricker, Aveni, and Hernández have agreed on a reconstruction, used here, in which the day-year combinations seem to tie in with the maize cycle in central Mexico.⁶⁴

The maize auguries of these years and days are directly related to Tlaloc and the quality of the rain he brings:

y1 Reed, [5] Movement, [?]: Tlaloc as Tezcatlipoca; sharp cutting water; in a box for treasures, the goddess wears the helmet of the wind god; it is a time of dangerous storms.

y2 Flint, 5 Crocodile, 10 Rain: Tlaloc as Tlahuizcalpantecuhtli; stony/icy water (hail) cuts the corn; the goddess is Xochiquetzal in a jeweled olla; it is a time of damaging hail or frost.

y3 House, 9 Water, [6] Serpent: Tlaloc as Xiuhtecuhtli; smoking or flaming water; the goddess with jeweled (?) headcloth is on a bed of rubber-spattered paper on the open mouth of the earth; it is a time of poisonous (?) rain.

y4 Rabbit, [5] Water, [8] Serpent: Tlaloc as Quetzalcoatl; water with worms or slugs (?); the goddess is Chalchiuhtlicue in a great turquoise bowl; it is a time when worms eat through the corn.

y5 Reed, 1 Water, 13 Deer: Tlaloc as the sun god below a cloudy sky; floral, beneficial water; a yellow-haired goddess is in a great jewel; it is a time when the beneficial rains occur.

Unlike the almanac on Borgia 27, the beneficial and harmful rains are not evenly balanced. Instead, four of the five cells describe destructive rains brought by Tlaloc. Only the central Tlaloc, painted as the sun god to combine the sun and the rain, gives off precious floral rains that nurture the maize.

The year and day dates seem to provide a key to these predictions. When combined with the years, the first set of day dates (e.g., 5 Movement, 5 Crocodile, 9 Water, 5 Water, 1 Water) yields days in mid- to late May in the years 1467–1471, and the second set yields days in June; together, the sets bracket the beginning of the rainy season in central Mexico, a particularly critical period for the maize crop (Hernández 2004, n.d.). Aveni has found that all of the May dates (the first set) can also be associated with Venus phenomena, to which the planting season may have been tied.⁶⁵ In this system, for example, the date y2 Flint d5 Crocodile below the upper right cell (Fig. 88) equates with May 19, 1468, a date characterized by the impressive line-up of Mars, Venus, Jupiter, and Mercury in the western sky. The mantic scene just above the date warns of destructive rains (damaging hail) or frost, and we may speculate that this dire prediction may even have been brought

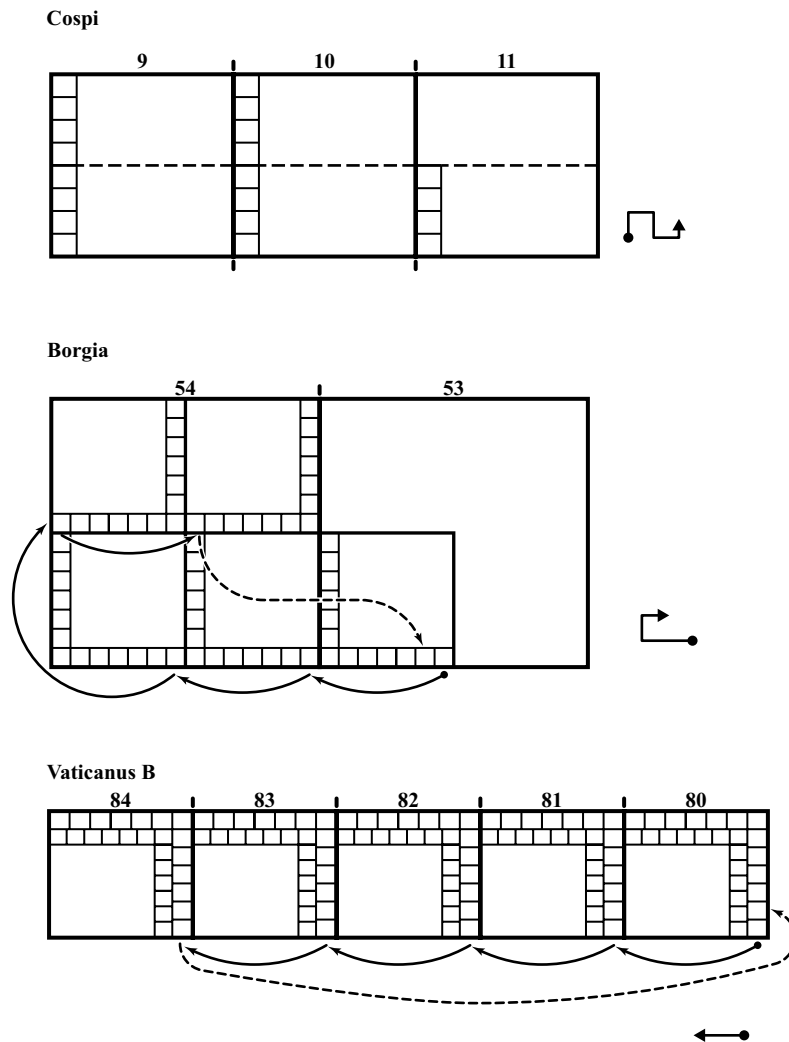


Fig. 89. Structure of the Venus almanacs: Codex Cospi 9–11b, Codex Borgia 53b–54, Codex Vaticanus B 80–84. Diagram by Markus Eberl.

on by the planetary alignment that the date references. In this rain almanac, dated Venus events may actually trigger the rain predictions, although Venus imagery is not itself much in evidence.

Venus Almanacs

Other almanacs pictorially describe Venus and its powers, however. Venus is the most important of all the planets and stars, third only to the sun and moon in significance as a celestial body. Three versions of an almanac specifically devoted to Venus appear in three

of the divinatory codices. As early as 1898, Seler recognized that the cognate almanacs on Borgia 53–54, Cospi 9–11, and Vaticanus B 80–84 present auguries for the heliacal rise of Venus, known to the Nahuas as Citlalpol (Morning Star) or Huey Citlalin (Great Star) (Figs. 89–91, Plate 9).⁶⁶ All three almanacs feature five mantic cells that picture the deity Tlahuizcalpantecuhtli (Dawn Lord, the personification of Venus as morning star) spearing various entities. The three versions share the same basic iconography and have the same calendrical structure, although the Cospi condenses and simplifies its calendrical material. The alma-

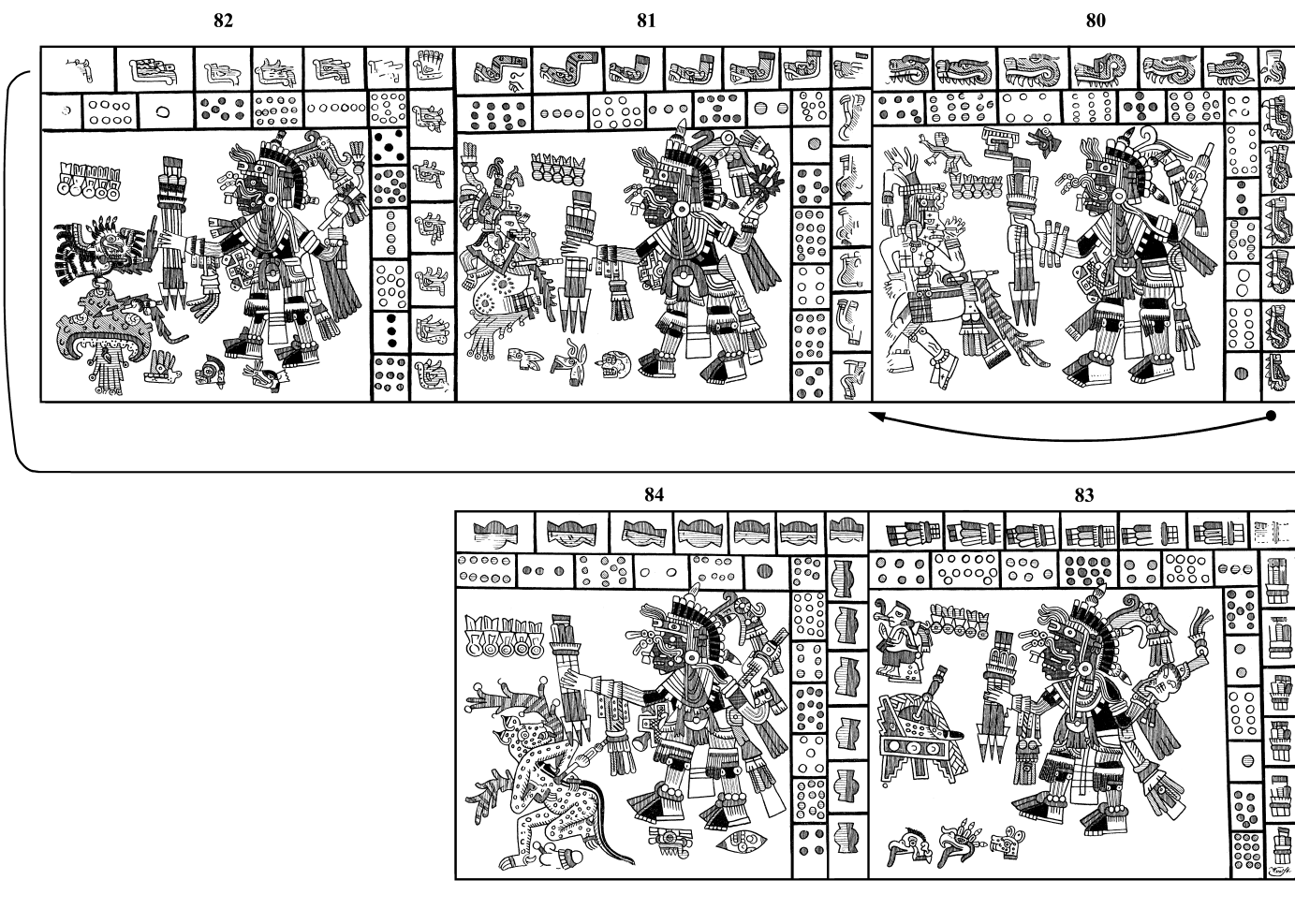


Fig. 90. Venus almanac. Codex Vaticanus B 80–84 (configured from Seler 1904–1909, 2:141–147).

nacs in the Borgia and Vaticanus B are structured as compressed tables that cover the 260-day cycle, but they are unique in requiring 146 passes of this cycle to give auguries for 65 Venus cycles.

As a planet, Venus appears and disappears over a 584-day cycle. After rising in the predawn east, it shines for about nine months as the morning star, sets and disappears for seven weeks, rises in the postsunset west to shine as the evening star for another nine months, and then sets and disappears for eight days before it rises again in the east. Never does it appear high overhead in the sky or very far away from the sun. As Aveni (1979:276) put it, Venus “appears to be hitched to the sun by an imaginary elastic line, upon which the planet bobs back and forth like a yo-yo, never receding

more than an arc of 45° from the sun on the celestial sphere.”⁶⁷ The Maya, and presumably the central Mexicans, tracked and canonically divided this 584-day cycle into four periods, composed of 236 days (morning star), 90 days (invisibility), 250 days (evening star), and 8 days (invisibility).

Despite the complex cycle of Venus, the central Mexican Venus almanacs focus only on the planet’s first appearance as the morning star, which occurs every 584 days. The chroniclers imply that this was the event on which the Mexicans put the greatest emphasis, because it is the one event they discuss. Motolinia (1971:60) says that after Venus disappeared in the west, the astrologers calculated when it would rise in the east and on that day held a great feast and sacrifice. Sahagún (1953–

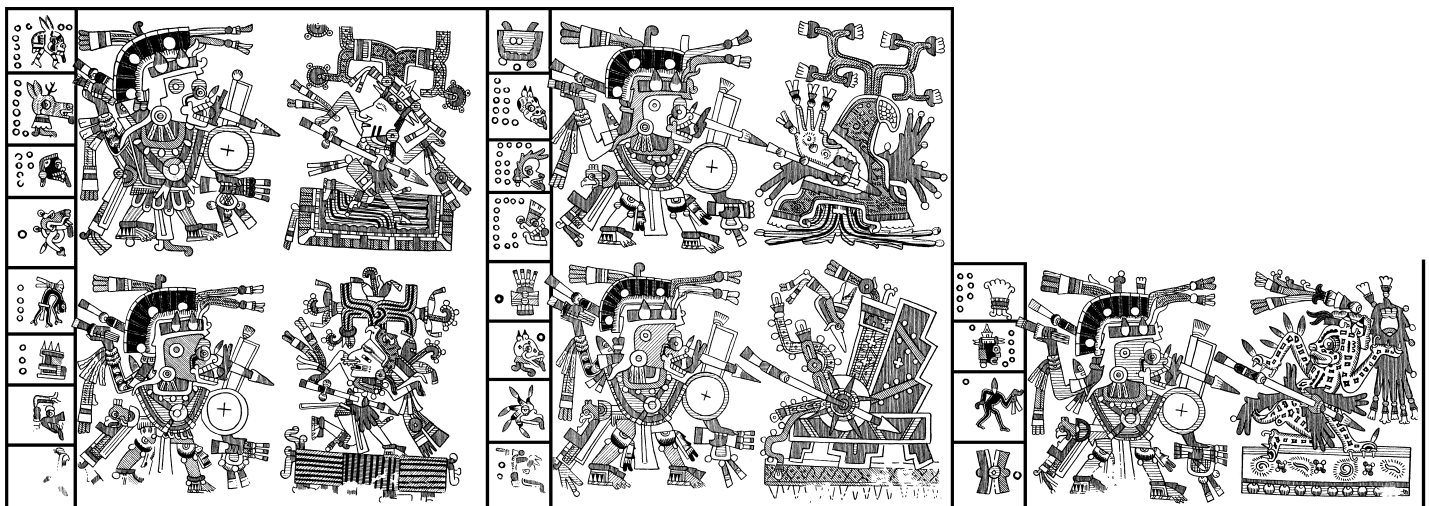
1982, bk. 7:11–12, 62) speaks only of the rise of Venus as the morning star, when “it burst forth completely, took its place in full light, became brilliant, and shone white. Like the moon’s rays, so did it shine.” He also mentions human sacrifices offered then. The *Anales de Cuauhtitlan* (our best textual source on Venus auguries) describes how Quetzalcoatl fled ancient Tollan, cremated himself on the shore of the Gulf of Mexico, and rose again eight days later as the morning star; he had become Tlahuizcalpantecuhtli (Dawn Lord) (Codex Chimalpopoca 1992:36).

Both Sahagún and the *Anales of Cuauhtitlan* mention that the rise of Venus in the east brought peril. Sahagún (1953–1982, bk. 7:12) says: “And when it newly emerged, much fear came over them; all were frightened. Everywhere the outlets and openings [of houses] were closed up. It was said that perchance [the light] might bring a cause of sickness, something evil, when it came to emerge. But sometimes they regarded it as benevolent.” The *Anales* characterizes Venus as a shooter who targets different aspects of nature and culture: “And so, when he goes forth, they know on what day sign he casts light on certain people, venting his anger against them, shooting them with darts. If he goes on 1 Alligator [Crocodile], he shoots old men and old women, all alike. If on 1 Jaguar or 1 Deer or 1 Flower, he shoots little children. And if on 1 Reed, he

shoots nobles, the same with everybody if on 1 Death. And if on 1 Rain, he shoots the rain. No rain will fall. And if on 1 Movement, he shoots youths and maidens. And if on 1 Water, there is drought, etc.” This succession of days (1 Crocodile, 1 Jaguar, 1 Deer, 1 Flower, 1 Reed, 1 Death, and 1 Rain) is the succession of the beginning days of the first seven *trecenas*, which implies that the author of the *Anales of Cuauhtitlan* was describing the fates based on a Venus almanac divided into *trecenas* rather than structured like the extant Venus almanacs. We should therefore not expect the *Anales* auguries and the auguries of the painted almanacs to match exactly; and, indeed, they do not.

These verbal accounts do shed light, however, on the iconography of the five mantic cells in the Venus almanac, where the Venus god shoots different creatures and objects. In the Vaticanus and Cospi (Figs. 90 and 91, Plate 9), he respectively shoots the maize deity Centeotl, the water goddess Chalchiuhtlicue, a hill sign with water or blood flowing from it representing the concept of polity, a throne representing the concept of rulership, and finally a jaguar, probably representing warfare or warriors. The Borgia includes virtually the same scenes, although the first three are in a different order—first the water goddess, then the water-hill (*altepetl*) sign of polity with Tezcatlipoca on it, and then the maize god on a chinampa—and in the

Fig. 91. Venus almanac. Codex Cospi 9–11b (configured from Seler 1904–1909, 2:141–147).



fifth it omits the jaguar and instead pictures the shield-and-spears symbol of war set on parched land. Despite these variations, the cognate almanacs record that the appearance of Venus as morning star variously brings harm to the maize, halts the rain, endangers the polity, threatens rulership or the rulers themselves, and puts an end to warfare.

Calendrically the almanacs are structured as compressed tables. Each of the five scenes (and five auguries) is associated with four day signs. Below and along the side of each scene in the Borgia and Vaticanus B, the first of these four day signs appears with a coefficient thirteen times. The other three days associated with each scene are then signaled not by disks but by day signs (without numbers) located within the mantic cells; they function as spacers. Thus, each scene is linked to the thirteen specific days (number-sign combinations) painted around it, as well as the three days that follow them (represented by day signs). The count reads in the same manner as do all the other compressed tables: it begins with 1 Crocodile in the lower right and passes through [2] Wind, [3] House, and [4] Lizard in the first cell; from there it moves on to 5 Serpent (the first day name of the second cell), passing through [6] Death, [7] Deer, [8] Rabbit; then on to 9 Water (beginning the third cell), passing through [10] Dog, [11] Monkey, [12] Grass; on to 13 Reed (beginning the fourth cell), passing through [1] Jaguar, [2] Eagle, [3] Vulture; and then to 4 Movement (beginning the fifth cell), passing through [5] Flint, [6] Rain, [7] Flower; from [7] Flower it moves back to the first cell, where 8 Crocodile is the second day, to repeat the progression again. Each pass through the almanac covers twenty days. The second pass begins with 8 Crocodile, the third pass with 2 Crocodile, the fourth pass with 9 Crocodile, and so on for thirteen passes. It is a 13×20 almanac: thirteen passes each covering twenty days grouped four to a scene over five scenes. In this respect, the Venus almanac is a straightforward 260-day count, which repeats endlessly.

But the almanac uses day names and not merely day signs and spacers, which suggests that it is intended to record a greater cycle. As Seler (1904a:374) noted, each of the day signs marks the beginning of a 584-day Venus period, when Venus rises in the east. To achieve this 584-day count, a user of the almanac counts through the entire almanac twice ($260 + 260$ days),

adds three single passes (3×20 days), and counts four more days ($+ 4$ days). If the first Venus period begins on 1 Crocodile (first position of first scene), the second Venus period begins on 13 Serpent (fourth position of second scene), the third period begins on 12 Water (seventh position of third scene), and so forth, with each Venus period beginning three places ahead in the next scene. Table 12 presents the beginning of each successive Venus period. In this way, each of the sixty-five day names represented around the mantic cells marks the beginning of a Venus period, so the almanac presents not just a 260-day count but a larger count of 65 Venus periods. The sophistication of the Mesoamerican calendar is such that 65 Venus periods equal 104 vague years (of 365 days) and 146 cycles of the *tonalpo-hualli* (260-days); this is the minimal period in which the three cycles coincide. The Venus almanac, then, presents the user with five prognostications for the heliacal rise of Venus as the morning star. The first rising (here 1 Crocodile) pertains to the first scene, the second rising (here 13 Serpent) to the second scene, and so forth.

The Cospi version has simpler calendrics (Fig. 91). Lacking spacers or repeating day names, it presents the twenty day signs with successive coefficients only once: 1 Crocodile, 2 Wind, 3 House, and so on. In this way it is a simple grouped list, associating four sequent days with each of five scenes. The first day associated with each scene (Crocodile, Serpent, Water, House, Movement) carries the coefficient 1, however, rather than the expected number of its place in the sequence. Anders, Jansen, and van der Loo (1994:249) suggest that these days represent the first days of the five groups of thirteen Venus periods: 1 Crocodile begins the first Venus period, 1 Reed begins the fourteenth Venus period, 1 Serpent begins the twenty-seventh period, 1 Movement begins the fourth period, 1 Water begins the fifty-third period, as shown in Table 12.

Aveni (1999) and Bricker (2001), seeking to plant the Venus almanac in the Borgia in real time, have recently tied the 1 Crocodile starting day to specific Venus phenomena. Aveni (1999:S9) relates it to the presence of Venus and the sun together on the eastern horizon on March 26, 1467; and Bricker (2001:S26–S27) links it to the heliacal rise of Venus in the east on August 31, 1473. Bricker (2001) further proposes that the Borgia almanac is a predictive mechanism for discovering the actual

Table 12. THE INITIAL DAYS OF SUCCESSIVE VENUS PERIODS
(READING FROM TOP TO BOTTOM, LEFT TO RIGHT)

Crocodile	1	9	4	12	7	2	10	5	13	8	3	11	6
Serpent	13	8	3	11	6	1	9	4	12	7	2	10	5
Water	12	7	2	10	5	13	8	3	11	6	1	9	4
Reed	11	6	1	9	4	12	7	2	10	5	13	8	3
Movement	10	5	13	8	3	11	6	1	9	4	12	7	2

Source: After Seler 1904a:374.

heliacal rise of Venus between 1473 and 1505; as she shows, the actual rises during this period fit within the four-day window associated with each scene (although not usually on the first day of each scene and not reliably after 1505). Regardless of whether this fit is an artifact of the canonical 584-day cycle and the normal 1 Crocodile starting date, the structure, calendrics, and iconography of the Venus almanac combine to record the supernatural forces at work during the times of the heliacal rise of Venus. Each time Venus rises in the east, the calendar priest can locate its exact date in the almanac and read the fate that its appearance brings.

The extant corpus of divinatory almanacs is extremely rich and varied. It contains 102 individual painted almanacs, representing sixty-five different kinds. The almanacs vary according to which cycles of the calendar they treat, how they arrange their units, which spiritual forces are referenced, and how they link the temporal units to these forces. Long manuscripts such as the Borgia and Vaticanus B contain a dizzying array of calendrical permutations—the Borgia has twenty-eight almanacs and the Vaticanus B has thirty-one. In contrast, other manuscripts, like the Tonalamatl Aubin or Aubin No. 20, feature only a single almanac. Some almanacs are grand and elaborate in their presentations, whereas others are quietly simple. The Tonalamatl Aubin's lone almanac (Fig. 47), for example, intercalates four cycles along with their forces—the twenty day signs combined with the thirteen numerical coefficients, the thirteen Volatiles and Day Lords, the nine Lords of the Night, and the twenty *trecenas* and patrons in a fully embellished presentation. In contrast, a little almanac in the Vaticanus B (95; Fig. 64), occupying

only half of the small page, links the day signs to four supernatural scorpions, although the simplicity of its statement is probably deceptive.

Certain almanacs appear repeatedly in the corpus, however. Nearly thirty exist as cognates in two or more codices. Those that are included in three or more codices can be considered the “standard” almanacs, which collectively form what amounts to a divinatory canon. Most of these are multipurpose almanacs, as might be expected. The most common is the one that organizes the full 260-day cycle into *trecenas*, presented with their patrons. It occupies all of the Tonalamatl Aubin and is featured in the Aztec codices Borbonicus and Telleriano-Remensis (and Vaticanus A/Ríos) as well as the Borgia and Vaticanus B. Whereas the Aztec codices include in this presentation the sequence of the nine Night Lords and the thirteen Volatiles, the Borgia Group codices treat these cycles separately. Next most common is the great *in extenso* almanac that opens the Borgia, Cospi, and Vaticanus B. Both almanacs are exceptional in picturing all 260 days in the cycle.

Because they picture all the days, the full almanacs can be used to locate a specific day easily within the 260-day cycle. The table format of the *in extenso* almanac, in particular, facilitates a reader who is looking to know where a particular day falls within the count. Once its basic features are grasped (e.g., its sequent *trecenas* organized in rows of four, and the implied numeration of its columns), it is as easy to use as the *tonalpo-bualli* of Table 1 in this book. A diviner needing to enter the complex calendrics of some of the other almanacs (e.g., the marriage almanac of Borgia 57; Fig. 79) could use the *in extenso* almanac at the front of the Borgia as a guide.

Another standard almanac is that which links the twenty day signs individually to their patron deities; two versions of this almanac appear in different codices (Borgia and Vaticanus B), which suggests that both variations were common (Figs. 56–58). Corporeal almanacs that locate the day signs over a deerskin also must have been standard, for they appear in the Tudela, Borgia, and Vaticanus B (and, in a Europeanized variation, over a human body in the Vaticanus A/Ríos) (Figs. 44, 59–61, Plate 5) and are described by Juan de Córdova as normal divinatory forms.

Most of the extant codices contain directional almanacs of some kind, although they seem to vary from manuscript to manuscript. The cosmological map on Fejérváry-Mayer 1 (Fig. 65, Plate 6) is unique, but it is generally related to other directional almanacs; and some of its parts (e.g., nine Night Lords) are standard features. The complex almanac on Borgia 49b–53b that links the *trecenas* to the four directions (Fig. 71, Plate 7) is not fully replicated elsewhere, but several of its components are. The gods making offerings to temples, cosmic trees, and animal attacks are isolated as independent almanacs in other codices (Figs. 42, 73, 74). This almanac may well be associated thematically with the genesis passage in the Borgia (discussed in Chapter 7), for it seems to describe the establishment of societal and cultic features over the four directions. In this respect it may have a dual function of narrative and almanac.

Almanacs topically related to marriage, birth and infancy, and Venus must also have been usual features of divinatory codices. The marriage almanac that combines the couple's day signs is found in the Borgia, Vati-

canus B, and Laud, and the set of six marriage pairs appears in Borgia and Fejérváry-Mayer (Figs. 79–82). The four-part almanac that links the four stages of birth to five different gods is also featured in Borgia, Fejérváry-Mayer, and Vaticanus B (Figs. 83, 84). Similar Venus almanacs are painted in the Borgia, Cospi, and Vaticanus B (Figs. 89–91). Most of the codices also include almanacs pertaining to travel and agriculture (usually maize agriculture), although these are more varied.

The manuscripts that are complete, except for the aberrant Laud, open with large general-purpose almanacs: with the *tonalpohualli* presented in *trecenas*, with the great *in extenso* almanac, or (like the Fejérváry-Mayer) with another full treatment of the *tonalpohualli*. Other standard, general-purpose almanacs follow, such as the twenty day signs and their patrons and the nine Lords of the Night. The Borgia Group codices also tend to end with presentations of the full cycle, although often in a condensed form. Both the Fejérváry-Mayer and Vaticanus B, as well as the Tudela, end with corporeal almanacs. The birth almanacs come early in the codices. In the Borgia and Vaticanus B, they are the first specialized almanacs to follow the major generalized ones. This seems logical, for a daykeeper reading a fate of an infant would likely begin by consulting several of the generalized presentations before focusing on the birth act itself. In between these introductory and closing sets, the scribes arranged the other general-purpose, directional, and topical almanacs, according to their complementary nature, topical clusters, or sometimes even physical fit, in order to pack the manuscript fully with divinatory information.



Protocols for Rituals

The daykeepers looked to the almanacs for the auguries of the days and other units of time, but they also needed to know what kinds of offerings or penances these auguries required and what actions might improve them or ensure the most positive fate. When Sahagún describes the *tonalpohualli* and the prognostications of its *treceñas* and days, he occasionally mentions that certain ceremonies should be performed or certain actions taken to achieve the desired fate. A woman born on the day 1 Flower, he says, will be an able embroiderer, but “in order to gain her deserts, and to achieve skill in embroidering, she should do great penances, and fast, and draw blood when the day sign One Flower set in” (Sahagún 1953–1982, bk. 4:25). The painted divinatory books do not usually or consistently specify which penances should be made, for much ritual was probably so well understood that it did not need to be recorded; but from time to time the codices do address these concerns by picturing actions or offerings that could ameliorate a negative prognostication or ensure a good one. The books imbed this information in the mantic cells of some almanacs and treat other rituals through separate, descriptive presentations. These autonomous descriptions, or protocols, of rituals stand apart from the almanacs. They operate independently from even

the almanacs that pertain to the time in which the ritual occurs.

Ritual Cues within Almanacs

Within the almanacs, information about rituals that are to be performed is manifest as offerings, actions, and occasionally the appearance of the participants themselves. Such cues often appear as discrete elements that float within the mantic field in a pattern that George Kubler and Charles Gibson (1951:38) and Donald Robertson (1959:90) termed “scattered attribute.” As Quiñones Keber (1987:189) points out, many such elements are standard ritual paraphernalia, such as bloodletters of various kinds, bowls of offerings, incense bags and burners, musical instruments, and sacrificed beings (decapitated birds, humans, etc.), and clearly signal ritual behavior.¹ Aside from floating in the undefined space of the mantic cells, offerings can also be held and ritual behaviors enacted by various participants who appear in the cells. Usually these elements are greatly abbreviated to capture a ritual’s essence.

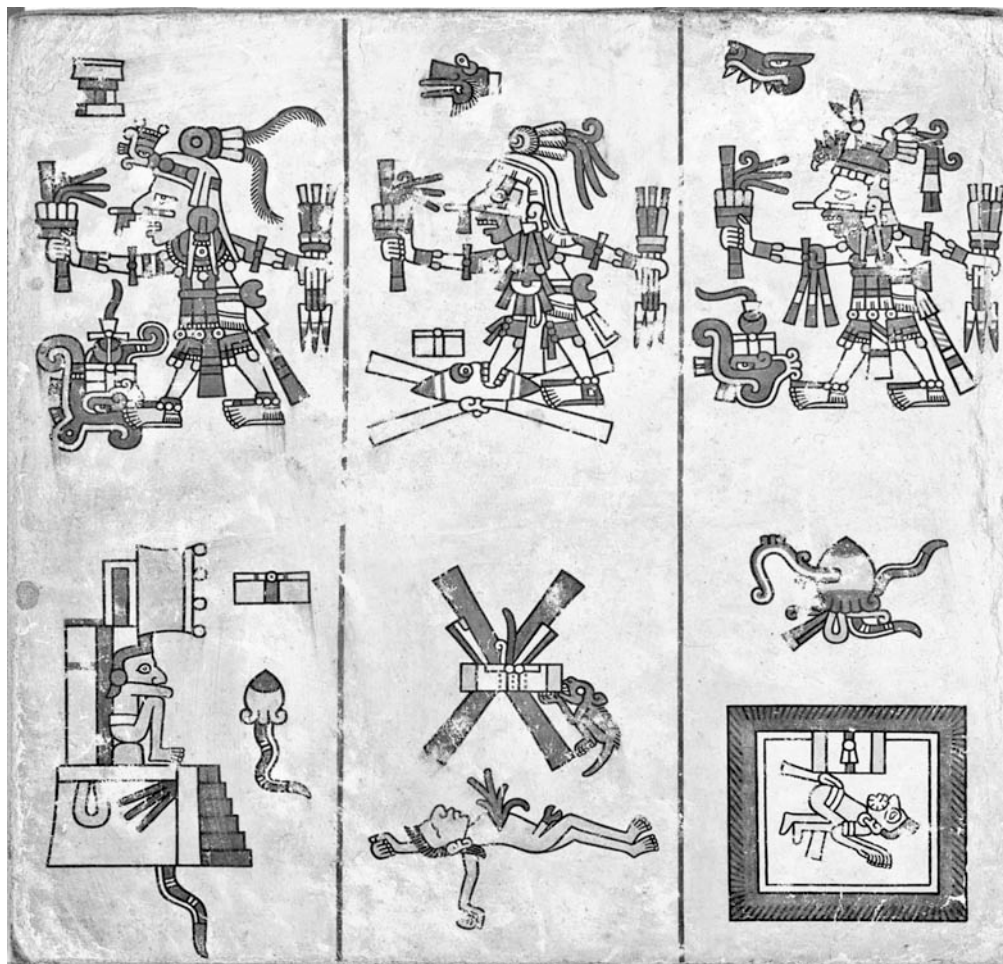


Fig. 92. The first three Night Lords accompanied by images depicting and signaling ritual behavior and offerings to be made. Fejérváry-Mayer 2. Photograph © National Museums Liverpool.

Almanacs that are iconographically rich naturally provide the most information on rituals. The large mantic cells of the *trecenas* in the full *tonalpohualli* presentations often include images of specific offerings and actions, in addition to the augural forces. The more elaborate and expanded presentations (like those in the Borbonicus) contain the most information about rituals and penances, whereas the simplest *trecena* presentations (like those in the Telleriano-Remensis) usually have none at all. Presentations of medium complexity (as in the Borgia) might include an offering or two.

In the Borbonicus, for example, the mantic cell for the fourth *trecena*, beginning on 1 Flower and governed by Huehuecoyotl (discussed in Chapter 5; Fig. 46,

Plate 1), contains a number of floating images: an incense pouch, a panel of paper, crossed maguëy spines with the symbol of night or darkness, a tripod bowl with another maguëy spine and an unidentified foodstuff, and another bowl with this foodstuff; all are embellished with a floral element symbolizing preciousness. Additionally, a serpent is cut in half. Together these elements signal that incense, paper, drawn blood, and other precious materials are to be offered to effect a good fate. Specifically, blood is to be drawn during the night, perhaps even at midnight, and a serpent must be sacrificed. The Tonalamatl Aubin version of this *trecena* panel (Fig. 47) includes the maguëy spines (held by Huehuecoyotl) and the incense pouch. Dur-

ing this *trecena*, drawn blood and incense are clearly crucial, and we remember that Sahagún specified that a woman born on 1 Flower should draw blood to achieve her foretold skill in embroidery.

As a rule, the almanacs in the Borgia Group codices include fewer elements pertaining to ritual, offering, and penance. One of the fuller presentations is the almanac of the nine Lords of the Night that appears in both the Borgia and Fejérváry-Mayer (Figs. 52, 53). The Borgia version shows all the lords holding out a packet of bound kindling (splints of resinous pine) with a ball of rubber (adorned with a plumed panache) on top. This tells us that these are standard offerings appropriate for the Night Lords. In addition, other packets of kindling and balls of rubber are placed with other kinds of offerings in the temples, on the waters, and at the crossroads to designate specific offerings for individual lords. In the Fejérváry-Mayer version (Figs. 53, 92), the standard packets of kindling and balls of rubber are accompanied by other gifts, such as human hearts and bloody maguey spines. Ritual action is also specified here by human figures who crouch in penitential pens, lie dead with their hearts cut out, and touch their

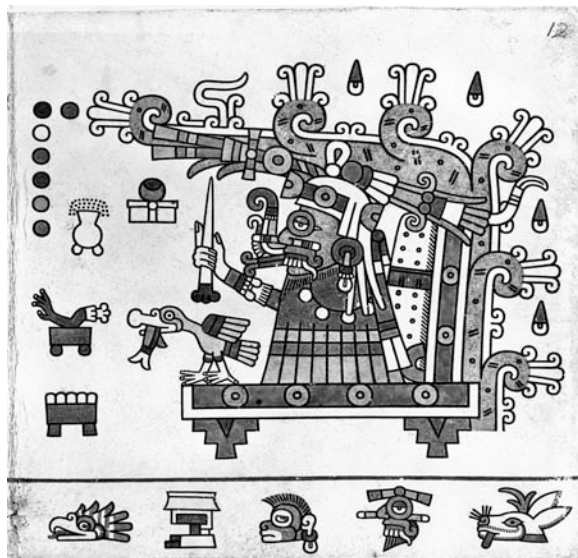
tongues to their hands as if “eating the earth.”² Another almanac rich in ritual cues pertains to the lords of the half-*trecenas* in the Laud (Figs. 77, 93, Plate 10). There the lords are seated under their bowers, holding out ceremonial implements like bloodletters, weapons, and bowls of offerings; other offerings float in the space before them. The rain god Tlaloc, for example, holds out a bone awl; before him are a rubber ball on top of a packet of kindling and vessels containing pulque, a severed human arm, and probably a foodstuff (corn, tamales?). We thereby understand that these offerings and bloodletting are required for the abundant rain predicted by Tlaloc and his misty, rainy bower.

Ritual Protocols Involving Counted Offerings

In addition to these kinds of abbreviated data on offerings and penances included within the almanacs, three of the Borgia Group codices—the Cospi, Fejérváry-Mayer, and Laud—also devote whole sections to explaining specific rituals and ceremonies. These thirty-eight presentations are distinctive because all the ceremonies involve great quantities of carefully counted objects. The Cospi presents eleven of these ceremonies, which occupy all the eleven painted pages on its reverse (Fig. 94). The Laud has three, spread over eight of its forty-six pages. Practically the whole of the obverse side of the Fejérváry-Mayer (5–21) is devoted to such a series of rituals, as is a half-page on the reverse; it contains twenty-four rituals on nineteen of its forty-four pages. See the Appendix for the location of these rituals.

Whereas the almanacs are descriptive or indicative in character (telling of the mantic forces affecting periods of time), these ritual presentations are prescriptive. They lay out, if only in brief, the components necessary to the ceremony and tell something about how these components are to be used or ordered. These presentations have the nature of recipes, which list the ingredients necessary to create a product and describe how the ingredients are then to be manipulated. They are protocols both in the scientific sense of being “an official statement or account of a proceeding” and in the diplomatic sense of being “a rigid long-established

Fig. 93. The rain god Tlaloc under a bower as one of the lords of the half-*trecenas*, accompanied by offerings. Laud 13. Photograph courtesy of the Bodleian Library, Oxford.



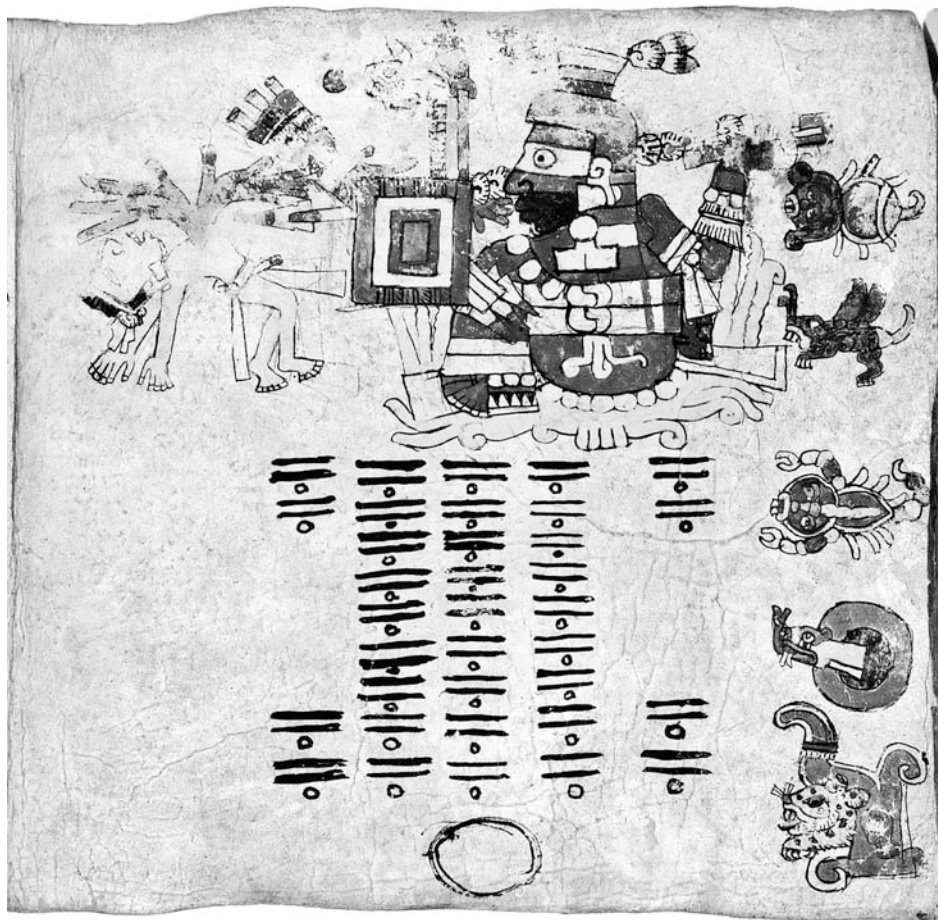


Fig. 94. Protocol of counted offerings that invokes Xiuhtecuhtli for protection against stinging and biting animals. Cospi 21. Photograph courtesy of the Biblioteca Universitaria, Università degli Studi di Bologna.

code prescribing . . . strict adherence to due order of precedence and precisely correct procedure” (Webster’s 1963:1824). Like protocols, the ritual pages are formalized statements of procedure. They are less concerned with listing all the elements that combine to create something (as would a recipe) than with ensuring that each action is carried out and each component is placed correctly in the proper order.

Not all the ingredients are listed, nor all the steps or activities described. Probably only the extraordinary ones or the particularly essential ones are included. If every ritual involves song, for example, song becomes an unmarked category; because it is understood to be present, it does not require articulation. But the offering of a forearm, called for on Laud 13 to bring beneficial rains (Fig. 93), is a special element requiring

mention. We must therefore understand that much is omitted in the protocols, because the readers of the divinatory books only needed to know what was extraordinary and special for each ritual.

Because the purpose of the ritual presentations is very different from that of the almanacs, their organizational structure, and thus their “look,” is very different too. Calendrical elements are secondary, reduced to one or a few day names that date the ritual, so there are no sequences of day signs or spacers and no separate calendrical cells. Emphasis is instead placed on one or more supernaturals, the actions to be performed, and the objects to be manipulated. The whole is presented in a single, usually undivided, panel, which usually occupies an entire page, although eleven occupy a half-page.³

Usually these protocols feature one or more deities, a group of offerings, some ritual activity involving offerings, and, most distinctly, many rows or columns of repeated numbers recorded as bars and dots. These repeating numbers occupy much of the space of each page and are the outstanding visual characteristic of their protocols. The deities dominate the presentation as its subject. They usually are placed at or near the top center; they can be seated, standing, or walking and engaged in activities such as speaking, burning rubber, and making offerings. Usually offertory elements are pictured together in a row or column to one side of the deity. One or more day names (number-sign combination) date the ceremony; occasionally they seem to name the deity, as when 1 Water appears with the water goddess Chalchiuhtlicue or 1 Death (the Mixtec name for the sun god) appears with a solar being (Figs. 99, 97). The rows and columns of repeating numbers then occupy either the central or the lower part of the page. In comparison with the almanacs, the imagery in the protocols is larger in scale, with more open space on the page, creating a less crowded and less detailed presentation.

The rows and columns of repeating bar and dot numbers have given rise to several misleading numerological propositions about the protocols. Scholars from Seler (1901–1902:49) to Nowotny (1961:272, 2005:302) referred to them as Maya-style numbers; but as van der Loo (1982:232) has pointed out, bar and dot numbers appear at Xochicalco, Monte Alban, Cuilapan, and Yucunúdahui; we see them also used calendrically at Cacaxtla. Although the Mixtec codices consistently use strings of disks to depict calendrical coefficients, at least occasionally they used the bar and dot notation for quantities (e.g., Selden 2d).⁴

Seler (1902–1923, 1:347) originally speculated that the numbers were “in imitation of unintelligible astronomical codices (but considered of use in magic) or were compiled on the basis of a numerical mysticism and directly for the purposes of magic.” Adding up the totals led him nowhere, so he suggested that the answer lay in the combined groups (the groupings of 11, 9, etc.), which reminded him of the footprints in the Borgia and Cospi *in extenso* almanacs that mark days according to the pattern of $9 \times 9 + 7 \times 7 + 9 \times 9 + 7 \times 7$ days (Seler 1901–1902:57–58). Trying to relate the numbers to the four quar-

ters and to the moon, he multiplied different quantities, divided them, and subtracted from them to reach approximations of lunar months: for example, “The number $9 \cdot 8$, which is given on [Cospi] Sheet 25 . . . would, multiplied by three, give 216, that is, ten days more than seven synodic months.” This fruitless lunar quest also led him to misinterpret most of the accompanying imagery (Seler 1901–1902:49–75). Ultimately, Seler (1901–1902:58) admitted that he did not know the meaning of the numbers.⁵

J. Eric S. Thompson, coming from a Maya perspective, took up Seler’s speculations afresh thirty years later and sought to achieve and manipulate numbers of great size in order to reach astral cycles. For example, he totaled the numbers on Cospi 21–23 to reach 1,091 and noted that it was one day short of thirty-seven moons; he totaled the numbers on page 24 to reach 277 and noted that it is eleven days more than nine moons (Thompson 1934:232–234). Caso (1967:79–85) followed Thompson in this approach, totaling these and other groupings of the numbers and dividing them by different (sometimes arbitrary) other numbers to achieve better approximations of the lunar cycle of 29.5 days. Usually, however, days and half-days were left over. This approach pursued an astral numerology that became an end in itself and virtually ignored the other imagery on the pages. It obscured rather than illuminated the protocols.

Clarification came when Nowotny (1961:272–275, 2005:302–306) drew on ethnographic analogy with modern ritual practices in Guerrero to interpret the codex pages as protocols for rituals involving many groups of counted objects. Nowotny saw equivalences between the pages in the Borgia Group codices and the accounts by Leonhard Schultze Jena (1933–1938, 3:140–151) of traditional Tlapanec ceremonies that involved the precise counting and arrangement of bunches of zacate grass. Schultze Jena’s diagrams of the ritual altars that were created during these ceremonies (Fig. 95) even approximate the visual appearance of the Cospi pages, especially since the bunches of zacate grass appear as lines that mimic the numerical bars in the codices. Subsequently Peter van der Loo (1982, 1987, 1989, 1994), also working in the Tlapaneca, developed this analysis further to draw specific parallels between the codices and modern rituals conducted in Huitzapula and Malinaltepec. Other ethnographers working

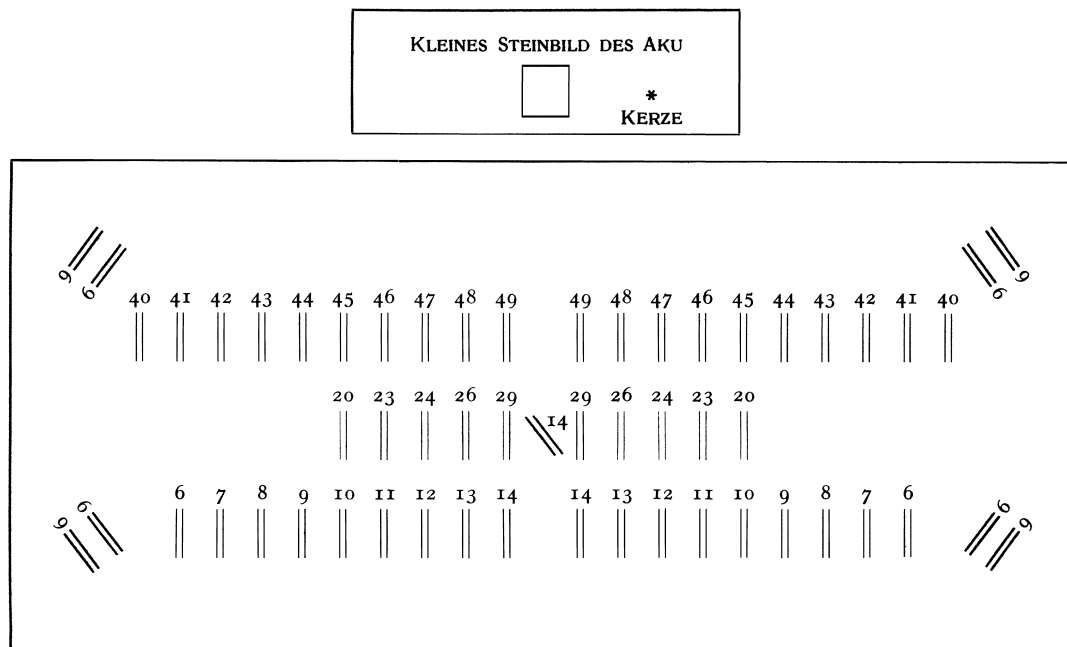


Fig. 95. Diagram of an altar for a Tlapanec healing ritual addressed to the earth lord Aku, present as the small stone figure at the top, with a candle nearby (from Schultze Jena 1933–1938, 3:145).

among the Tlapanecs (Oettinger and Oettinger 1975; Oettinger 1979; Dehouve 2001) and the Mixes in south-eastern Oaxaca (Lipp 1982, 1985, 1991) describe similar rituals and codical parallels.

These modern rituals are conducted for a variety of reasons. They can get rid of an evil spirit, heal a *naual* (animal other) or mental trauma, and otherwise make a person well; they can usher in new municipal authorities at the new year, succor the rain god, appease the gods of the hunt, make a marriage prosper, and soothe the recently dead.⁶ These rituals can be personal or village-wide ceremonies, as simple or as elaborate as the client can afford. Addressed to a supernatural whose beneficence is sought, the ritual requires both offerings and bunches of counted things. Offerings often include candles, copal, cigarettes, pulque or liquor, tamales, eggs, and farm animals, from chickens to cattle. Most important, however, are the bunches of small items that have been scrupulously counted and then bound. These individual items include pine needles, pine splints, reeds, stalks of herbs, or zacate grasses that are bunched and bound together as well as strings of counted flowers. The important feature

is that these items are carefully counted, grouped, and bound into bunches before the rituals. During the ritual, the master counts and arranges the bunches or bundles in rows or patterns in a precise sequence on the altar. The altar in these situations can be a flat stone, a mat, a large leaf, or even a simple cleared space. Every act accompanies and reinforces the invocations and prayers being said.

The counted and bound items serve to cleanse the participants, to safeguard the ceremony from harm, to invoke the gods, and to carry the message. Their kind and number may depend on the nature of the ritual, and their meaning naturally varies depending on the location. Among the Tlapanecs, a ritual may employ bunches of six and nine objects or bunches of six, nine, and fourteen; another ritual requires bunches of thirteen, seventeen, eighteen, twenty, fourteen, and forty-six (Fig. 95). Extra bunches of fourteen might be bound to counteract any mistakes that might have been made in the initial preparation or in the ritual itself (Nowotny 1961:274, 2005:304). The bunches are placed carefully in rows or arranged to form a square with other bunches layered on top. Bunches are laid at

the four quarters to appease the feared souls of the dead or to cause evil to recede, and additional bunches are placed to make amends for any omissions or excesses. The number of objects in each bunch, its placement, and its order are all important. Each bunch has its own meaning and purpose, and each must be placed at its proper time.

The master places the bunches on an “altar” in front of a fire, usually next to a sacred image. While placing them, the master states what each group signifies. During a ritual conducted in Malinaltepec to heal a sick *naual*, the master placed four bunches of six zacates “so the bad will recede,” four bunches of seven zacates “for mother earth where the *naual* lives,” four bunches of eight zacates “for the master who makes the ritual,” four bunches of nine zacates “for the souls who have no faith,” and so on up to four bunches of twenty-nine zacates “for the soul of the master so the words of his soul will be received.” The bunches of six and nine came early because they served to repel bad forces. Then he placed the other offerings of copal and six candles and sacrificed a chicken, slitting its throat and then cutting its tongue (van der Loo 1982: 233–234; Anders, Jansen, and van der Loo 1994: 271–276).

Numerology, but of a decidedly nonastral kind, is an important factor in these rituals. The Tlapanecs understand the numbers to correspond to actions and wishes directed to different entities and individuals. The Mixes of southeastern Oaxaca share this general sense that different numbers correspond to different realms, although for them it is different sets of spiritual beings (e.g., 137 corresponds to beings in the mountains, 136 to beings in the fields, and 135 to evil winds) (Lipp 1991: 84–88). In a hunting ritual, after a large animal like a deer or peccary is killed, piles of thirty-three, twenty-seven, eighteen, nine, and seven leaves are left; but for smaller animals, lesser piles of eighteen, nine, and seven are left; a jaguar merits piles of 118, 176, 175, and 90 (Lipp 1991: 73–74). Rituals that involve the setting down of carefully cut paper figures (called *muñecos*), which are conducted by Nahuas, Otomis, and Tepehuas living in remote regions of Veracruz, are similarly based on a numerology. Different numbers of paper figures and offerings are required for different rites and goals.⁷

We know little about numerological thought in an-

cient central Mexico, aside from the numbers of the basic calendrical cycles and levels of heavens and underworld. Four, being the number of the cardinal directions, is considered to symbolize completeness, and five is associated with excess and with things involving the human hand;⁸ nine calls up the Lords of the Night and the underworld.

Although numerology must have been important for the Aztecs and their neighbors, the chroniclers do not usually mention counted offerings, probably because they were more interested in the identity of offerings than in their quantity and arrangement. Motolinia (1951: 130–132, 1971: 77–79), however, does mention that in Tlaxcala, in preparation for the great feast to their patron god Camaxtli, the high priest passed 405 sticks through his tongue as a blood offering; later, during the feast itself, 405 victims were sacrificed. This seems a curious number; but as Seler (1901–1902: 59–60) noted, it is $5 \times 9 \times 9$. The Tlaxcalan blood offerings thus numbered nine groups of nine repeated five times, or nine groups of five repeated nine times, both for the tongue sticks and for the heart sacrifices.⁹ Lipp (1991: 112) has pointed out that bound bundles of reeds figure in some ceremonies described by Sahagún: to wit, Nanahuatzin offered bundles of reeds, bound together in threes, as part of his penance at Teotihuacan before he became the sun; similar bundles of three reeds were spread around during the feast of Teotileco (Sahagún 1953–1982, bk. 7: 4, bk. 2: 127). Sahagún (1953–1982, bk. 2: 98) also notes that, during the feast of Hueytecuilhuitl, braziers were arranged in six rows, ten to a row. There was surely much more of this counting and arranging than has been recorded.

The offerings placed within the pyramid of the Templo Mayor probably included carefully counted and arranged items. Several caches contained great quantities of relatively mundane items, which suggests that the quantities and groupings mattered as much as the items themselves. For example, on level one of Cámara 2, the archaeologists counted 298 whole conches and 757 fragments, 3,997 snails and 22 fragments, 42 fragments of unworked greenstones, 716 fragments of worked greenstone, and so forth; level two added 98 figurines, 56 masks, 57 large snails, and so forth (López Luján 1993: 333). Offering 48 yielded the bodies of 42 infants sacrificed to the rain god (Román Berrelleza 1987: 132).

Were the archaeological preservation better, we would have a more precise sense of the number and placement of these offerings.

Specific multiple quantities of carefully counted offerings were a feature of some Maya rituals as well. The God C almanacs in the Paris Codex (15–18) contain numerical sequences that count out different kinds of offerings that were to be made during the rituals specified by the almanacs (Love 1994:54–63; Bricker and Bricker n.d.: 9–10, 20–30). Harvey Bricker and Victoria Bricker (n.d.:24) also report that in 1925 Frans Blom and Oliver La Farge (1926–1927, 2:366–368) encountered in a shallow cave in Chiapas the physical remains of a ceremony involving counted and bundled offerings of cut fir tips, as well as candles and incense. Specifically enumerated offerings were also a feature of a number of rain-making and other ceremonies performed in the Yucatan through the last century (Redfield and Villa Rojas 1934:138–143; Bricker and Bricker n.d.:24–26).

The protocols in the Cospi, Fejérváry-Mayer, and Laud represent rituals that involve counted offerings like these. Graphically they specify the day of the ritual, the major offerings to be made, often the presiding deity, and always the number and grouping of the counted bunches of items. They state their quantities according to the bar and dot system, and some arrange these numerical quantities on the manuscript page according to their correct placement on the ritual altar. The manuscript page thus represents the altar.

The Cospi protocols in particular have the look of Tlapanec altars. They all picture the god being addressed, line up offerings and items being discussed on the two sides, and arrange the quantities of counted items symmetrically in the middle, with extra bunches to mark the corners. Cospi 21 (Fig. 94), for example, features the fire god Xiuhtecuhtli seated in yellow flames and armed with shield, spears, and spear-thrower. The date is 1 Rabbit, which perhaps coincidentally is the first day of the twentieth *trecena*, presided over by Xiuhtecuhtli; as a year bearer, it signals the year the earth was said to have been created and thus carries an earthly association. The ritual appears to seek relief from the pain of biting and stinging animals, who are listed in a column along the right side. Reading from bottom to top, it names a jaguar emerging from a cave, a snake in a hole, a scorpion, a wasp,

and a spider. This may be a literal request for protection from these animals. If so, it would be an ancient visual equivalent of a modern Tlapanec ritual addressed to the Old Man of the Hill, the Master of the Animals, to protect hunters from such bites and stings.¹⁰

The major offering is the ultimate one, a human sacrifice. Below, the counted items are in groups of eleven, arranged in three rows, nine groups to a row ($3 \times 9 \times 11$), with an extra two groups of eleven at the four corners. These corner units especially recall the Tlapanec practice of placing bunches of zacate at the four corners to appease the souls of the dead or to cause evil to recede. All the Cospi protocols have them, but they involve different numbers. The Cospi especially gives the impression that the visual arrangement of the numbers and items on the page signals the correct pattern for placing the counted offerings on the actual altar.

The eleven Cospi protocols pertain to three distinct subjects. The first four pages feature these biting animals; they invoke Xiuhtecuhtli, Tezcatlipoca, Tlaloc, and Xolotl (?) and specify quantities of eleven, eleven, seven, and seven, each in three columns. The next two protocols invoke the goddesses Xochiquetzal and Tlazolteotl and feature a snail, worm, and other elements insecurely identified (Fig. 96); their numbers are eight and six. They may pertain to agriculture (Laurencich Minelli 1992:117–118); or, if the snail is the source of purple dye and the worm is the cochineal, these rites may pertain to textile production and decoration (Anders, Jansen, and van der Loo 1994:313–318). The next five protocols most likely pertain to the hunt, for they invoke Mictlantecuhtli and versions of Tezcatlipoca and feature animal heads with hearts attached (Laurencich Minelli 1992:118–120; Anders, Jansen, and van der Loo 1994:319–330). They particularly resonate with modern Tlapanec rituals in which the hearts and heads of animals are offered in petition for a successful hunt.

The protocols in the Fejérváry-Mayer are more diverse. They feature a wider range of gods and elements, and their arrangement of the quantities is less particular. Ten of the protocols (pp. 5–14) share the same features and thus seem related. Each occupies a full page and presents a seated deity facing a fire in which a ball of rubber is burnt, usually also with a bundle of kindling (Fig. 97). Each has one or more day names, which implies that these day names date the proto-

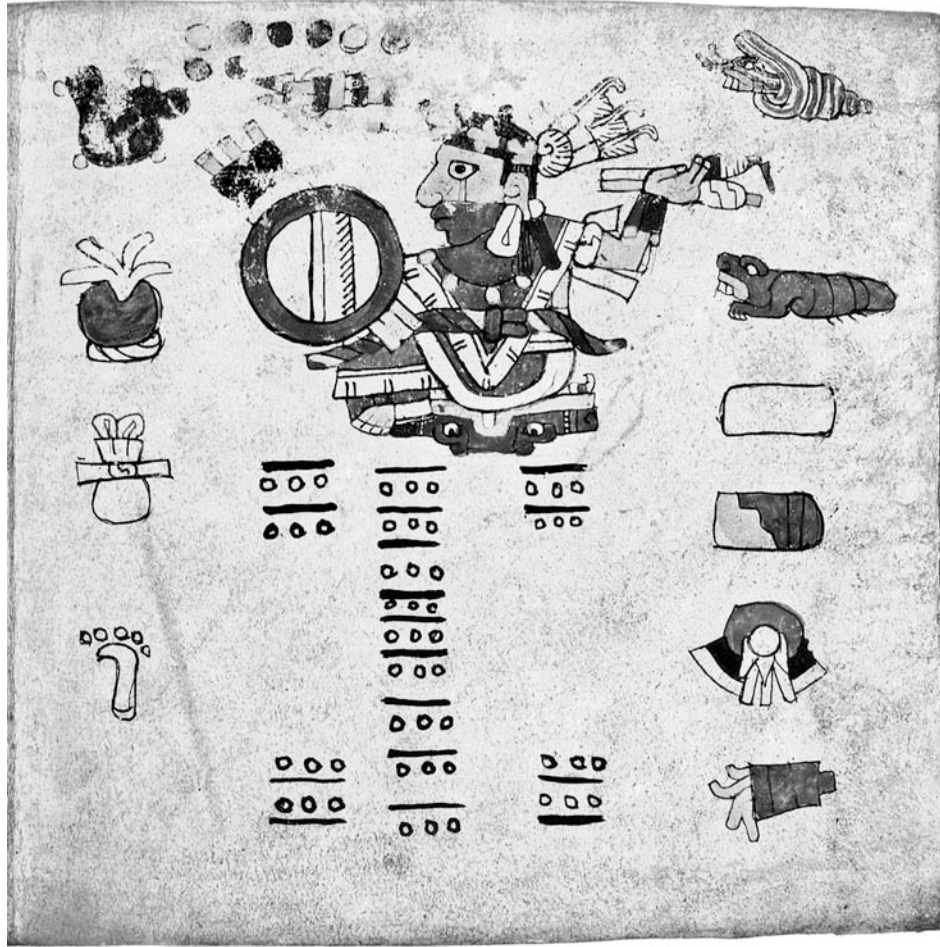


Fig. 96. Protocol of counted offerings that invokes Xochiquetzal. The snail and worm in the upper right may be animal sources of textile dyes. The counted offerings listed on the left are probably copal, rubber, and a small tied bag. Cospi 25. Photograph courtesy of the Biblioteca Universitaria, Università degli Studi di Bologna.

cols rather than name the presiding supernaturals, although in many cases the day of the feast will be the day name of the deity. Stylized shapes and simplified pictures (of shells, feathers, water, copal, etc.) usually record the small offerings being counted and grouped. Their quantities are laid out in three rows in groups of 6, 7, 8, 9, 10, and 11.

The first of this group (Fig. 97) parallels the first Cospi protocol in featuring creatures that bite and sting. It pictures a red Macuilxochitl or Xochipilli sitting on a jaguar-skin ottoman holding sacrificial instruments: bone awl, flint knife, and sacrificial cord. In front, a fire on a large, stepped altar burns a ball of

rubber and a bundle of ten bound sticks. Behind and in a row below Macuilxochitl are the biting and stinging creatures, like those in the Cospi: a small jaguar emerging from the earth, two kinds of cacti, the coiled serpent, the scorpion, and black and white wasps. The date 1 Death dates the ritual; it is the first day of the sixth *trecena* and, according to Sahagún (1953–1982, bk. 4:33), the day sign of Tezcatlipoca in his aspect as Titlacauan, “master of the earth, master of the lords of the earth.” This earthly connection reminds us of the Tlapanec ritual that asks the Master of the Animals for protection against harm. The day 1 Death is also the Mixtec day name of the sun god, which resonates with

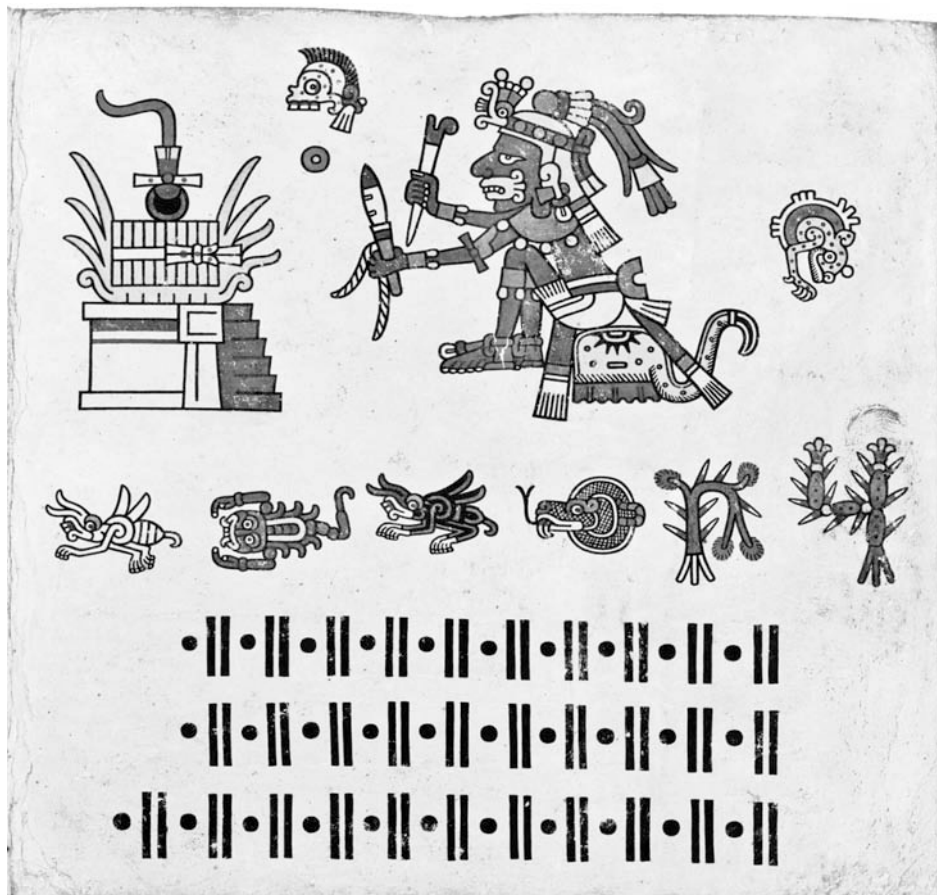


Fig. 97. Protocol invoking Macuilxochitl for protection against stinging and biting creatures. Fejérváry-Mayer 5. Photograph © National Museums Liverpool.

Macuilxochitl's solar aspects. The numbers of counted offerings, displayed in three rows, are ten groups of eleven, with one extra group of eleven in the bottom row, perhaps to accommodate any errors; we note that the Cospí ritual (Fig. 94) also involved bunches of eleven. The Fejérváry-Mayer and Cospí protocols both pertain to sharp, painful bites and stings and involve blood sacrifice, fire, and counted groups of eleven. They seem to be invocations for protection from some of the fiercer aspects of nature, the creatures that bite and puncture.

The other protocols in the Fejérváry-Mayer are more varied. Two (pp. 15, 16) fill the pages almost entirely with rows of numbers in units of 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, and of 11, 13, 14, reading from top to bottom.

The protocol on p. 15 (Fig. 98) has very little imagery aside from the numbers: an uncolored rat and squirrel facing a colored heart on the left, and a bunch of feathers at the top next to the day 1 Dog.¹¹ The single numbers 5, 6, 7, 8, and 9 on the left may refer to the heart and animal offerings above them. The other numbers—11, 13, and 14, each arranged ten to a row in three rows ($3 \times 10 \times 11$, $3 \times 10 \times 13$, etc.)—probably pertain to the feathered bunch at the top. The mysterious set of crossed bars may depict two groups of five, arranged crosswise with each other. The repeating numbers have crowded out almost all the imagery. A protocol like this concentrates on the counted offerings rather than on the supernatural force being invoked. This tells us that the reader must already know the purpose of the

ceremony on the day 1 Dog and requires only a reminder of the exact amounts to be offered.

The reader would know, for example, that 1 Dog is the first day of the fourteenth *trecena*, which is presided over by Xipe Totec. Like Sahagún (1953–1982, bk. 4:87, bk. 2:39), the reader might regard the day as a favorable one and would know it to be the feast day of the fire god Xiuhtecuhtli and also the day that rulers were elected. According to Sahagún (1953–1982, bk. 4:87), for the feast of Xiuhtecuhtli they formed the god's image in the temple, decapitated a quail and spread incense, and proceeded to embellish the image. "They adorned and bedight it in all manner of paper array. The fabrication [of the paper articles] was in charge of those called paper-cutters and designers. They provided it with feathers; they scattered feathers over it; provided it with various kinds of costly feathers and dispersed a variety of them over it." This description may provide a key to the omitted imagery in the Fejérváry-Mayer. The feathers spread so heavily over the cult image of

Fig. 98. Protocol for a ritual on the day 1 Dog that offers rodents and bunches of feathers counted in groups of eleven, twelve, thirteen, and fourteen. Fejérváry-Mayer 15. Photograph © National Museums Liverpool.

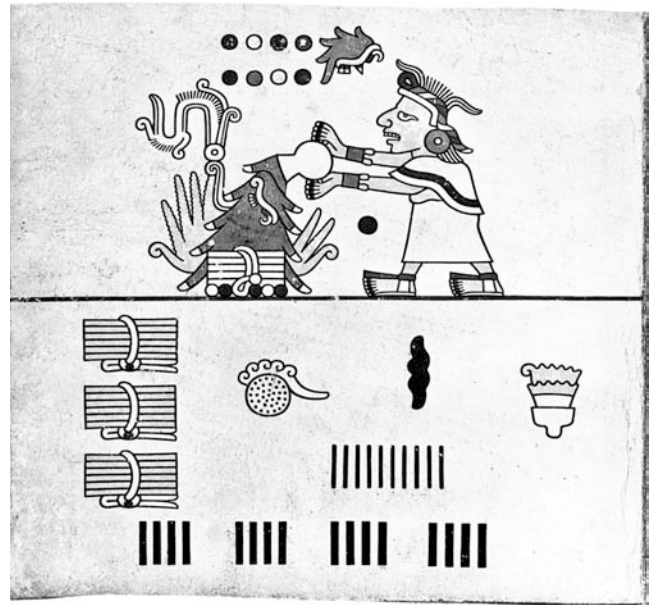


Fig. 99. Protocol for a ritual on the days 1 Water and 8 Water, probably dedicated to Chalchiuhtlicue. Laud 46. Photograph courtesy of the Bodleian Library, Oxford.

Xiuhtecuhtli may be represented by the bunch at the top of the protocol, and the numbers below would pertain to their number and the way in which they were spread, perhaps ten groups of eleven *this* way three times, then ten groups of thirteen *that* way three times, and so forth. The white or uncolored rodents on the left might possibly be paper cutouts, although their association to Xiuhtecuhtli is otherwise unknown. Already knowing the patron and the reason of the ceremony, the reader is told the offerings and their specific quantities and groupings.

The few protocols in the Laud (and there are only three) place more emphasis on the ritual activities than on great quantities of counted goods. The protocols on pp. 45 and 46 form a pair, both featuring a woman making the offering (Fig. 99). They both have two registers, with the ritual activity on top and the counted items (in units of twenty) on the bottom, and they both contain the date 1 Water and another date with coefficient 8 (8 Water and 8 Deer). On Laud 46, a woman pours water on burning kindling, releasing a great

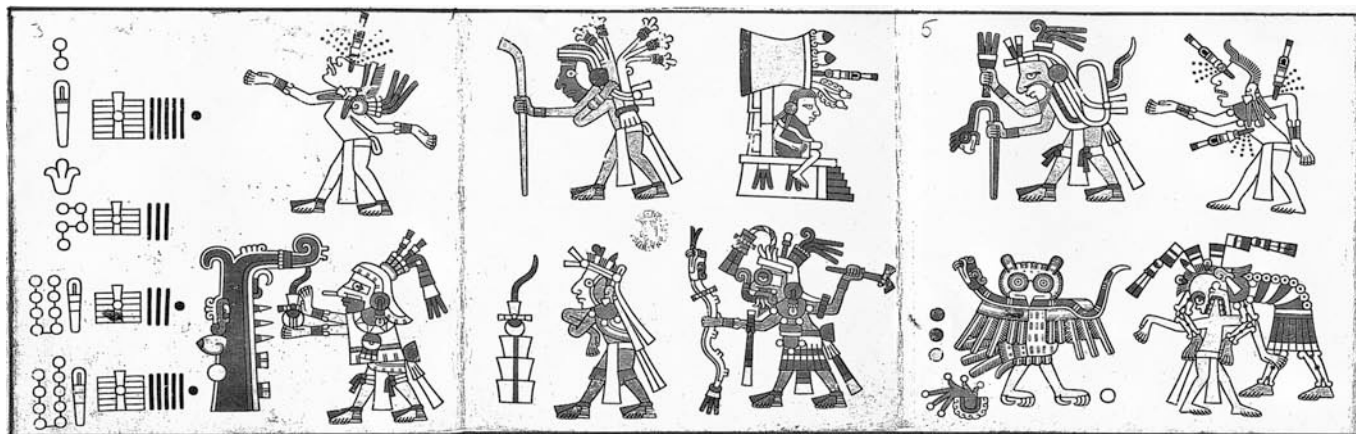


Fig. 100. Ceremony involving twenty-two human and supernatural participants who move from right to left and ultimately make an offering of rubber in a cave. Laud 17–22 (configured from the 1966 edition; reproduced with permission of Akademische Druck- u. Verlagsanstalt).

cloud of steam. The days here are 1 Water (the day sign Water is actually in the water) and 8 Water, twenty days later. The lower register pictures three bundles of sticks (six per bundle), a ball of smoking copal (?), an undulating red form similar to the diminutive serpent scepters (replicas of Tlaloc's staff) found in Templo Mayor offerings, and what appears to be a flower or paper panache.¹² The quantities of these items to be offered are one group of fifty and four groups of twenty. The day 1 Water is both the first day of the seventeenth *trecena* (governed by the jade turkey Chalchiuhtotolin) and the feast day of the water goddess Chalchiuhtlicue. Sahagún (1953–1982, bk. 2:39, bk. 4:99) tells how the water folk—those who sold water, owned boats, fished, transported water in boats, and launched boats—observed the feast by making offerings to Chalchiuhtlicue, “who represented the water.” He does not, however, indicate what these offerings were.¹³

The long presentation that spans Laud 17–22 focuses on twenty-two human and supernatural figures, most of whom are walking toward the left (Fig. 100). They begin under or within the heavens, with a male carrying bloodletters and another male (who has the face paint of Tezcatlipoca) drilling fire, and continue to the final figure, who offers a ball of rubber before the open mouth of the earth monster, symbolizing a cave. Behind the cave are four dates (9 Reed, 8 Reed, 5 Flower,

and 2 Reed) with counted bundles of sticks, in single units of 26, 16, 15, and 26 (reading from bottom to top). Although the counted offerings of kindling are the end result of the ritual, the visual focus is on the twenty-two participants. They include the supernaturals Mictlantecuhlti, Tlaloc, and Quetzalcoatl, merchants, men being speared, one woman seated in a conquered temple, and assorted other males. Anders and Jansen (1994:245–254) identify several as appearing elsewhere in the codex, but their participation in this ritual (and the ritual itself) is not understood. This presentation of the many participants recalls scenes in some of the Mixtec genealogical histories, where many lords gather for a meeting or celebration (e.g., Zouche-Nuttall 54–68, involving Lord 8 Deer, his half-brother 12 Movement, and 112 lords from elsewhere).

Regrettably, we do not yet know why most of these rituals involving counted offerings were conducted. Those in the Cospi can perhaps be assigned to dangerous stinging animals, to textile production, and to the hunt with some assurance; but the long ritual in the Laud and most of the others are still a mystery. The day dates signal the timing of the rituals, and some days may accordingly pertain to the deities being invoked. The function of the protocols is to give the reader the information needed to conduct the ceremony properly. This sometimes means that the supernaturals are repre-



sented and the ritual actions are depicted. Offerings that are specific to a deity or are out of the commonplace must be specified. Above all, however, the protocols must state the quantities, order, and sometimes placement of all the carefully counted offerings that are

required for the ceremony, for this is the kind of information most likely to be misremembered. These protocols involving scrupulously counted items preserve vestiges of lost numerological systems that once must have been widespread in central Mexico.

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The Cosmogony in the Codex Borgia

One part of the religious-divinatory corpus that is both unique and especially enigmatic is the eighteen-page section of the Codex Borgia from page 29 through page 46. Most scholars who have offered interpretations or descriptions of this section differ to varying extents on its interpretation; but they all do agree that the eighteen pages form a single unit, which is organized into subsections, seemingly with a beginning and an end. They all recognize its distinct format and orientation and see it as fundamentally different in purpose than the divinatory almanacs that precede and follow it in the codex. Most see it as a sequence of events or rituals (even if not all of them call it a narrative *per se*), because figures seemingly move from one page to another to carry the “story” along. There is a strong directional movement from page 29 through page 46. The interpretation I advance here is that the section is a cosmogony, one that generally parallels but does not coincide with creation stories that have survived for the Aztecs, Mixtecs, and Maya.

The section is oriented perpendicularly to the rest of the codex. The right side of page 29 is the top of the section, and the scenes then read from top to bottom, all oriented to implied ground lines that parallel the fold sides of each page. The reader must therefore rotate the manuscript 90 degrees to the left to view it correctly.

No other indigenous-style screenfold shifts its spatial orientation so completely, although a few have scenes that are oriented vertically when the rest of the manuscript reads horizontally.¹ This shift in the orientation of the Borgia makes a dramatic visual statement, which signals a fundamental change in the manuscript’s nature. It clearly sets pages 29–46 apart from the rest of the codex.

The section also captures our attention because it spans the turning of the codex from front to back. Pages 29–38 are the last ten pages of the obverse, and pages 39–46 then continue for eight pages on the reverse. This is one of only two manuscripts in the entire corpus of Mexican screenfolds with a sequence of material that bridges obverse and reverse. The Mixtec historical screenfolds, with the exception of the Codex Egerton 3895 (Sánchez Solís), have independent narratives on their two sides; the Maya almanacs and the other Mexican almanacs all begin and end with the edges of their paper or hide strips.²

Previous Interpretations

Interpretations of this section of the Borgia have focused either on its narrative quality or on the distinc-

tiveness of its individual segments, with some trying to balance the two. Eduard Seler emphasized the narrative quality of the section and saw it as a continuous story played out over the painted pages. Karl Anton Nowotny, in contrast, deemphasized the continuity and instead placed greater emphasis on the relative independence of each scene; he saw the section as depicting a series, but not necessarily a sequence, of distinct rituals. Occupying a middle ground are others who see a sequence of successive rituals: a narrative, as it were, of sequent ritual activity.

Seler (1904–1909, 2:1–75, 1963, 2:9–61) was the first to interpret this complex section of the Borgia, and his perspective has continued to be influential, despite strong arguments against his overarching paradigm. Seler's work remains fundamental to any interpretation, because he offers the most thorough description and iconographic reading of each scene. Moreover, most of his identifications of the participants, their actions, and the physical and architectural settings are sound. It is only when Seler extrapolates from his first-level identifications and assigns larger meaning to the scenes that his evidence becomes much weaker.

Seler (1963, 2:9–61) saw the vertical section of the Borgia as representing part of the journey of the planet Venus through the heavens and underworld as it passed through its 584-day cycle: specifically from the time of its setting in the east as the Morning Star, through its invisibility and appearance as Evening Star, to its rise once again in the east as Morning Star. Accordingly, he viewed the first four pages as depicting the disappearance of Venus as Morning Star and its subsequent invisibility as it traveled through the underworld toward the west. To him, the following six pages (33–38) then represented the appearance of Venus in the west as the Evening Star. Beginning on the reverse, the next six pages (39–44) tracked the subsequent disappearance of Venus into the underworld as it journeyed back to the east; and pages 45–46 depicted the rise of Venus again in the east as Morning Star. For Seler, the Borgia section represented a supernatural journey through cosmic space occupied by gods and spirits.

Driving this model was Seler's belief in the celestial nature of Mesoamerican supernaturals, a belief also bolstered by contemporaneous work on Babylonian religion. In particular, accounts of the epic journey

of the Babylonian goddess Ishtar through the underworld influenced his interpretation of the ritual passage as Quetzalcoatl's own underworld journey, as pointed out by Anders, Jansen, and Pérez Jiménez (1994:64). Seler clearly placed greater emphasis on the narrative features of the Borgia section—especially the continuity implied by figures that seem to move from page to page—than on the distinctive nature of individual scenes. He identified these page-bridging male figures as a single entity, whom he equated with Venus in his manifestation as Quetzalcoatl. Not all of the figures have headdresses and body paint associated with Quetzalcoatl, however, and definitive Venus imagery is relatively sparse. Moreover, as Milbrath (1989:104) has pointed out, the day signs so carefully placed throughout the section have no noticeable relation to Venus phenomena. In fact, Seler offered very little concrete evidence to support his Venus journey scenario, and his detailed identifications and descriptions of individuals and actions seldom fit his model. Seler asserted the Venus journey rather than argued convincingly for it.

The next major scholar to read this section was Karl Anton Nowotny, who consciously rejected what he saw as Seler's proclivity for overinterpretation and dismissed Seler's Venus reading. Instead, Nowotny (1961:245–256, 1976:26–30, 2005:264–279) characterized this section, which he termed “Temple Cult Rituals,” as a cycle of independent festivals of the kind that would have occurred in a particular ceremonial center. The architectural features were, for him, potentially identifiable as real structures, as opposed to components of Seler's cosmic environment. For Nowotny, the actors were largely priests rather than the gods themselves. He divided the section into fourteen distinct rituals, as opposed to the four Venus phases of Seler. Nowotny described each scene briefly, relying largely on Seler's first-level iconographic analysis, but refused to add more speculation to the issue and thus did not offer further interpretation or analyze the series as a whole. His interpretive model of a festival cycle has been accepted by most subsequent scholars.

Anders, Jansen, and Reyes García (1993:191–245) followed Nowotny's approach in their poetic but thorough reading of the section, and they fleshed out the descriptions with the best of Seler's iconographic identifications and their own readings derived from ethno-

graphic analogy and comparison with other codices. They titled this section “Nine Rites for the Light, the Life, and the Maize” and saw it as a series of rites but not necessarily a sequence. Like Nowotny, they viewed the action as taking place in a central ceremonial center; but for them, much of it falls more specifically under the supervision of the earth/mother goddess Cihuatl. Anders, Jansen, and Reyes García divided the Borgia section into nine discrete rites, as opposed to Nowotny’s fourteen.³

Contemporaneously, Bruce Byland (1993:xxiii–xxvi), in his commentary to the Dover edition of the Borgia, also followed Nowotny’s approach and proposed that a series of rituals is being presented, although he stressed narrative continuity a bit more and characterized the section as a narrative filled with ritual acts involving both humans and supernaturals. Byland insightfully noticed that the section begins with a series of “supernatural statements” that prepare the way for “a long ritual journey in which [the protagonist] performs several specific deeds” (1993:xxiii), which then ends with a shorter group of closing “acts that mark the end of the ceremony and the beginning of the new era” (1993:xxvi). Byland (1993:xxiv) and Byland and Pohl (1994:152–162) located several scenes in the real world and interpreted one long segment involving the opening of a ritual bundle (pp. 33–38, the segment with the greatest narrative force) as a prescription for a ceremony that would elevate a person to the rank of king or ruler of a community. Several other scholars have discussed and interpreted individual segments of the Borgia section, following Seler and Nowotny to varying degrees.⁴

A third perspective on the Borgia section also recognizes both the narrative or sequential qualities of the material and the relative independence of individual units. This approach views the section as presenting the eighteen monthly feasts or *veintenas* of the solar year. Susan Milbrath (1989, 1999, n.d.) and Gordon Brotherston (1999, n.d.) have proposed this correlation, although for different reasons. Both note that the Borgia section has eighteen pages, which suggests to them a relation with the eighteen monthly feasts. Milbrath accepts Seler’s thesis that the section represents the journey of Venus, but she suggests that each page was devoted to one of the eighteen monthly feasts, which

then can be correlated annually with the Venus cycle. Brotherston (1999, n.d.) rejects Seler’s Venus hypothesis, recognizes the multipage spread of some scenes, and argues that specific details within some of the compositions point to different monthly feasts. Both these interpretations require particular iconographic readings, however, and Milbrath’s astronomical perspective sees all the Quetzalcoatl-associated figures as Venus, which does not seem to be the case.

The most broadly accepted interpretations to date are those by Anders, Jansen, and Reyes García (1993) and Byland (1993), which build on Nowotny’s temple ritual model using the best of Seler’s iconographic identifications. Importantly, Byland also notes how the first and last scenes open and close the presentation. Still, these models leave us unsatisfied because they do not adequately account for all the imagery and its organization. They also fail to accommodate the real differences and similarities between the various subsections and scenes or explain why one scene should necessarily be included and why it should then lead into another. The motivation for these events remains unclear to us.

A Mexican Cosmogony

My own approach has been first to analyze the overall graphic structure of the section to identify its organizational features and then to look for commonalities in the imagery. This leads me to agree with Seler and others that the section should be read as a narrative, for the commonalities are much stronger than the differences between the individual scenes. Although I generally agree with, and here follow, Anders, Jansen, and Reyes García (1993) and Byland (1993) on the descriptions of most of the scenes (their first-level analysis is usually based on Seler’s), I see the sequence of events as more motivated than they do. Many of the section’s features point not to a cycle of festivals or series of rituals but to a narrative of creation.

Many of the structural and iconographic elements that one would expect to find in a Mesoamerican cosmogony are present: scenes of birth, emergence, and organization and the nearly constant actions of Quetzalcoatl, who is supremely a creator god for both the Aztecs and Mixtecs. We can also expect a Mesoameri-

can genesis to be accomplished through a series of supernatural acts and rituals, which is what we see in the Borgia.

Although there is no clear-cut correlation with other creation stories, a number of scenes recall specific places and actions that do figure in creation stories recorded in the sixteenth century for the Aztecs, Mixtecs, and Maya. The flinted enclosure on page 32, for example, recalls the flinted underworld layers painted in the Codex Ríos, as well as the underworld House of Knives described in the Quiche Popol Vuh. Quetzalcoatl's birth from a flint in the Borgia (32) parallels his flint birth in the Mixtec Codex Vienna. In the Borgia, humankind (in association with corn) is born of the creator couple Tonacatecuhtli and Tonacacihuatl (37), which reflects Aztec and Maya stories about humans being formed of maize; later Quetzalcoatl obtains maize for humanity from a Precinct of Maize, which recalls the Aztec legend about his journey to the Mountain of Sustenance. The last act of the Borgia narrative is the drilling of new fire, which throughout Mesoamerica initiates new temples, homes, and eras (Boone 2000a).

The Aztec and Mixtec creator god Quetzalcoatl figures constantly in the Borgia passage, appearing in several guises. As Lord 9 Wind, the Mixtec Quetzalcoatl is the principal agent of creation in the Codex Vienna cosmogony: he separates the heavens and waters from the earth, brings the earth's physical features into being, assigns titles to the other gods, and introduces the concept of polity and the accoutrements of rule to the Mixteca (Boone 2000b:91–95). Quetzalcoatl plays a similar role in the Borgia, often accompanied by Tezcatlipoca. Quetzalcoatl, along with his wind aspect Ehecatl, is a major creative force in Aztec creation stories, for he is the one who (with Tezcatlipoca) separates the heavens, earth, and water, who acquires the ancestral bones from which humans are made, and who brings out maize from inside the Mountain of Sustenance.

Throughout the Borgia passage we also see an emphasis on the quadripartite nature of the universe. Figures constantly appear in multiples of four, to reflect the four directions (or occasionally five, the fifth being the center): five wind serpents (29), four plants (30), five Tezcatlipocas (31), four eagle/flint warriors and four Tezcatlipoca warriors (31), four essences of rubber (33), four essences of fire (33), four night lords

(35), four essences of lightning (37), four captive victims (38), four serpents around the old creator couple (38), four Cihuateteo (41), four black ball players (42), four deformed Tonaleque (42), four Venus or star figures (45), four hearth goddesses (46), and four essences of fire from the fire drilling (46). When day signs appear, as they do on seven of the pages, they also are usually in sets of four. In most instances these figures are arranged in a rectangular configuration, equidistant from each other, as if to define the four directions. Usually they are differentially colored according to directional colors (generally red, blue, yellow, and white). Some architectural forms are also quadripartite, including the four-colored dark ball court (35), the flint enclosures (31, 44), the four "Eagle Houses" in which Quetzalcoatl figures sit on thrones (45), and the four-colored and four-sided hearth at the passage's end (46).

What is most telling, however, is that throughout the narrative section we see an emphasis on emergence and birth.⁵ From the initial page to the last, figures are depicted emerging from central forms, either singly or in fours or fives. They flow from the mouths of dark wind serpents that themselves writhe out of seething cauldrons and bundles (e.g., 29, 36); they burst from the joints of parturient figures (e.g., 32, 42); or they spring from precious disks or hearts that stand as metaphoric wombs (e.g., 31, 32, 33, 38, 42). Twelve of the eighteen pages have scenes of birth or emergence.

The Borgia narrative does not fully parallel the creation stories that have come down to us for the Mixtecs and Aztecs. This is partially due to the paucity and geographic spread of the sample. Very few creation stories for the Aztecs and Mixtecs have survived in the first place, and most of these are partial. Those that do exist usually disagree with each other about particulars and often about larger points. As Gerónimo de Mendieta (1971:77) noted when he reflected on the ancient paintings gathered by Andrés de Olmos from the polities of Mexico, Texcoco, Tlaxcala, Huejotzingo, Cholula, Tepeaca, and Tlalmanalco, different cities worshipped different gods and related different legends and stories. Pohl (2003a) points out that creation stories "were recounted in multiple, often conflicting variations." Indeed, Pohl (1999) found that three different cosmogonies, pertaining to three different ethnic groups, were painted on the palace walls at Mitla. Ancient cosmogonies came in many variations and were not mutually

exclusive. We should also keep in mind that the Borgia comes neither from the Mixteca nor from the heart of the Aztec empire, where most of the recorded Aztec cosmogonies originate. We should therefore not expect this story to parallel existing Aztec and Mixtec stories in all, or even most, respects. Many elements in the Borgia passage, however, do align with one or the other tradition, as well as with the Postclassic and early colonial Maya.

General Characteristics

The need for the reader to reorient the codex in order to access information in the narrative passage very effectively sets the passage apart from the rest of the codex. We must consciously leave the world of twenty-day almanacs and *tonalpohualli* counts in order to enter the distinctive world of the ritual and symbolic acts presented here. The pages of this passage also contrast startlingly with the almanac pages because they involve different images that are painted on a different scale, clustered in great numbers, and organized in very different ways. Many of the same deities appear in both, but the narrative passage has architectural and environmental features not seen elsewhere, it presents numerous spirits and essences, and its figures interact in scenes of action that are much more complex than the simple scenes that occupy some of the almanac cells. Absent also are the registers and red frame lines that divide the content of the almanacs so effectively into discrete cells.⁶ Instead, images flow across space in structured compositions that fill the pages and double-page spreads.

In the narrative passage, space functions actively to separate, link, and otherwise organize and assign meaning to the figures. Whereas in the almanacs the red lines of each cell work to relate or separate images by including or excluding them in cellular units, in the narrative section the elasticity of space itself relates images to each other. It is the spatial play and directional orientation that create scenes from the figures. Figures are grouped by spatial proximity and shared orientation and are separated by distance and contrasting arrangement. Many of the scenes have strongly symmetrical and central compositions that fill whole pages.

More so than in the almanacs, the contents of the

narrative passage respect the limits of the pages. We have seen that almanacs in the Borgia usually cross page breaks and obey the line of the register rather than the folded borders of the page. Most of the narrative section, however, respects the page edge at the folds; units tend to end and begin with a new page. But there are three important exceptions. Two large and multipart scenes span the interior fold between pages, occupying the full length of two facing pages (39–40, 41–42). And a single narrative passage, the one involving the opening of a ritual bundle (35–38), covers a four-page spread in two subunits: the acts of obtaining and opening the ritual bundle occupy two facing pages, and the subsequent flow of power carries the protagonist across an exterior fold and into a sacred space that occupies the next two facing pages. In the narrative section of the Borgia, the page thus has an authority greater than it does in the almanac material, but not such that the eighteen pages would signal eighteen separate units.

Quadrilaterals and Strip Goddesses

The page in and of itself never frames and separates one unit or subsection from another. Instead, structural features that take the form of quadrilateral gods and goddesses, earth bands, and strip goddesses function to delimit the scenes and organize the action into distinct units. Quadrilaterals appear only in the opening pages; thereafter, the strip goddesses take over as the primary structural elements.

Quadrilateral gods and goddesses frame the action on the first three pages; a rectangular precinct encloses imagery on the fourth. These quadrilateral supernaturals have the iconographic features of death gods: skull heads, dark coloring, wild “night hair” (punctuated with stars), conical headdress, and clawed extremities (Fig. 101). Their abstractly attenuated bodies are composed of bands of blood, darkness, and sometimes bone, which extend like a frame around the imagery inside; their clawed hands and feet extend at the corners. They appear in pairs—male (p. 29) then female (30), male then female (31 top, bottom)—the females signified by a band of unspun cotton in their hair and (on 30) a skirt. This male-female pairing reflects and reinforces the pairing of content and composition on these first pages. Openings at the bottom of the quadrilaterals allow figures to exit one scene and flow to another.

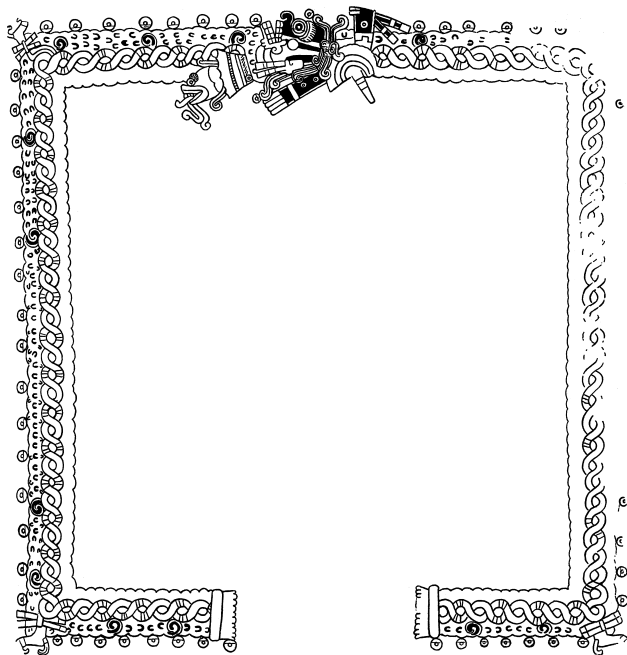


Fig. 101. A quadrilateral god who frames the events in the first pages of the narrative, with the skull head and death-god headdress and clawed hands and feet at the four corners. Borgia 29 (from Nowotny 1961:pl. 11; reproduced with permission of Gebr. Mann Verlag).

Following the quadrilaterals on the opening pages, the subsequent units of content are all separated from each other by what Nowotny (1961:247, 2005:268) termed strip goddesses (*streifenförmige Göttin*). These are earth/death goddesses whose torsos are elongated into strips that span the width of the page to form a border from one scene to the other (Fig. 102). The goddesses always have a skeletal head, clawed hands and feet, and the headdress of the death lords; their long torsos variously contain flint knives, skulls, Venus or star symbols, or netting.⁷ Their iconography alludes to darkness, sacrifice, and creation, but I believe they function less as specific gods than as the major structural elements that organize the narrative. They appear at the top or bottom of a page to signal a change in action or location from the previous or subsequent pages. The first strip goddess, who appears at the base of page 32, for example, effectively separates the action on the opening four pages (29–32) from the six-page narrative passage (33–38) that completes the first side of the codex. The next strip goddess appears as the first ele-

ment on the other side of the codex (top of 39) to delimit that new unit. Structurally, the strip goddesses divide the content of the ritual section into eight subsections; the quadrilaterals further subdivide the content of the first four pages, as follows:

SUBSECTIONS AND LOCATIONS OF STRIP GODDESSES

1. pp. 29–32, strip goddess (at bottom of p. 32)
 - a. p. 29
 - b. p. 30
 - c. p. 31 top, bottom
 - d. p. 32
2. pp. 33–38
 - turn codex to other side—
3. pp. 39–40 (strip goddess at top of p. 39)
4. pp. 41–42 (strip goddess at top of p. 41)
5. p. 43 (strip goddess at top of page)
6. p. 44 (strip goddess at top of page)
7. p. 45 (strip goddess at top of page)
8. p. 46 (strip goddess at top and bottom of page)

The last page (46) has two strip goddesses, one at the top to separate it from page 45, and one at the bottom to separate it from the almanacs that follow on page 47.

Like the quadrilaterals, these strip goddesses also provide continuity from one unit to another. The very center of their torso is cut open, with the opening bordered by the red and wavy yellow bands that signal cuts into flesh.⁸ In this opening appears a male figure in an active moving position (arms outstretched and legs bent in an exaggerated pinwheel), who appears to be leaving one scene or entering another.⁹ At the top of page 45 a dark wind serpent emerges instead of the male.

Actors

The figures who move through the strip goddess provide continuity to the narrative; they also usually participate in the actions that follow. Not all are visually identical (a skeletal Mictlantecuhtli moves through the strip goddess at the top of p. 41 to initiate an episode of human heart sacrifice), but most can be associated with Quetzalcoatl.¹⁰ Most wear Quetzalcoatl's headdress, shell pectoral, and curved shell ear ornaments, and some have his beard and distinctive face paint as well. The first and last of these males (bottom of 32,

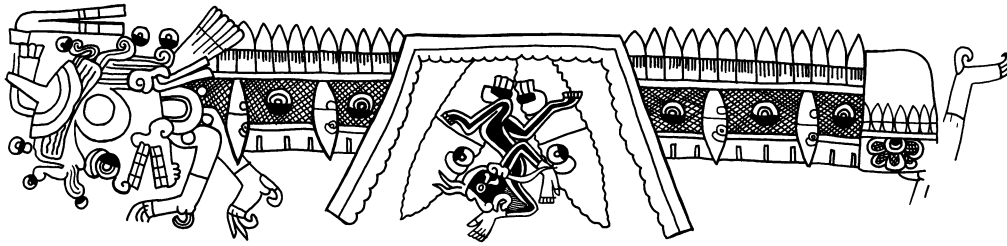


Fig. 102. A strip goddess who separates the episodes, with a skull head and death-god headdress and here with flints and stars on her torso. Quetzalcoatl flies through her to exit the page. Borgia 32. Drawing by Heather Hurst.

top and bottom of 46) are undeniably Quetzalcoatl, having the god's beard, black body paint, and tricolored (red, black, yellow) face paint (Fig. 103a). These emerging figures not only act as visual bridges from one unit to another but initiate or activate the rituals that follow, and they often participate in those rituals. They are actors in the larger drama that unfolds down the pages.

Although over a dozen different supernaturals are active in the ritual section, the males who appear most frequently and consistently throughout are Quetzalcoatl and Tezcatlipoca. Quetzalcoatl appears in three manifestations: Quetzalcoatl with his normal attributes and tricolored face paint; a black Quetzalcoatl, sometimes with smoke scrolls behind his eyes (Fig. 103c); and an individual that Byland (1993:xxiv) and Byland and Pohl (1994:157–159) have named Stripe Eye (Fig. 103b). The Quetzalcoatl with tricolored face paint is born from flints on page 32. He then is replaced in the narrative by other manifestations until he reappears for the final two episodes (45, 46), where he is the principal actor. The manifestation of Quetzalcoatl with black face paint and smoke scrolls behind his eyes is enshrined in the temple on page 32, obtains the bundle from the god of the night on page 35, and appears in various rituals later.¹¹

Stripe Eye is characterized by his flesh-colored face, marked by two black lines that intersect obliquely at the eye: one line extends from temple to eye, and the other runs from eye to back of chin (Fig. 103b).¹² This distinctive “stripe” is not unique but is shared by several other supernaturals. For example, Ehecatl (the wind manifestation of Quetzalcoatl) appears with this same oblique stripe in the Cospi (4, 8), although in Aztec and Mixtec sources Quetzalcoatl and his “monstrous” twin Xolotl more often have a vertical stripe.¹³ The Mix-

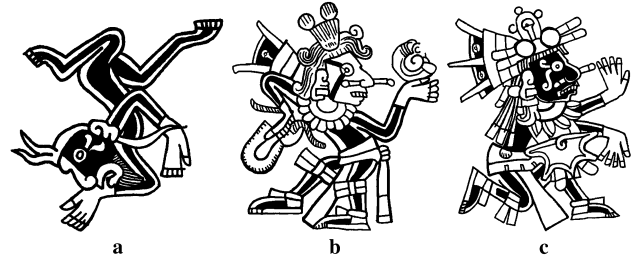


Fig. 103. The three principal manifestations of Quetzalcoatl in the narrative: a, Quetzalcoatl with tricolored face paint; b, Stripe Eye; c, the black Quetzalcoatl. Sources: Borgia 32, Borgia 33. Drawings by Heather Hurst.

tec sun god, Lord 1 Death (Vienna 25, Zouche-Nuttall 79), also has the oblique stripe on occasion, although Stripe Eye clearly does not function as a sun god in the Borgia. In the Borgia, this oblique “stripe” is also seen on a nude male (38), on three or four creator gods identified as Tonacatecuhtli or Tepeyollotl (38, 39, 41?, 43),¹⁴ and, in the almanacs, on a drum-playing monkey (24; Fig. 28). This range of beings with the oblique stripe suggests that it should be read as a qualifying trait rather than a defining one. Its appearance on the creator males suggests that it may signal the creative aspect of Quetzalcoatl, for Stripe Eye otherwise seems to replace Quetzalcoatl in the narrative and usually is costumed as Quetzalcoatl. Stripe Eye makes his first appearance on page 35, when the bundle is obtained from the lord of night and darkness, and he is the one who is carried away by the force of the opened bundle to land in the ceremonial precinct of pages 37–38. He is subsequently active in all of the scenes that follow until the last two (45, 46), when the Quetzalcoatl with the tricolored face paint replaces him.

Tezcatlipoca is their most frequent companion. Recognized by the smoking mirror at this temple and the black horizontal stripes on his face, Tezcatlipoca first appears on page 35, when he and the black Quetzalcoatl obtain the sacred bundle, and he participates in many of the scenes that follow. In this initial appearance, Tezcatlipoca wears the red buccal mask of the wind god Ehecatl and other costume elements of Ehecatl and Quetzalcoatl (35, 36). This unity of Tezcatlipoca and Ehecatl calls to mind several accounts in Aztec creation stories where Tezcatlipoca was assisted by Ehecatl. In the *Histoire du Mechique* it was Ehecatl who entered the earth lord (Tlaltecuhltli) with Tezcatlipoca to make a low sky; later Tezcatlipoca sent the wind to bring music from the house of the sun (Garibay 1979:105, III–II2). After this bundle episode in the Borgia, these Ehecatl/Quetzalcoatl accoutrements disappear from Tezcatlipoca, who then has his usual costuming. The recurring appearance of Quetzalcoatl and Tezcatlipoca provides continuity to the narrative.

Architecture

Three architectural structures also reappear several times throughout the section. Two celestial temples introduced on pages 33 and 34—a black wind temple with a tall conical roof and a red floral or “precious” temple with a rectangular “eared” roof (a roof with down-turned projections on the gable ends)—are the locations of cosmic events and statements. The temples then reappear several times, always facing each other (red on left and black on right) on the perimeter of a space in which sacred actions unfold (37, 40, and spanning the fold of 41–42). On 40 and 41–42, they are accompanied by a dark ball court (bordered by a scalloped band of darkness rimmed with stars). This ball court first appears on page 35, with its four corners differently colored, but it reappears on 40 and 42 with a solidly red interior.

The reappearance of several of the same actors and of the same architectural features seems to support the idea first advanced by Nowotny (1961:245–256, 2005:265–279) and developed by Byland and Pohl (1994:152–162) that we are concerned with a single location in which a series of activities takes place. We can also read the temples and ball court metaphorically, how-

ever, as complementary elements of the cosmos that recur for different events. The Red Temple is consistently a solar seat, the Black Temple is tied to dark winds, and the dark ball court is the locus of conflict and death. We should keep in mind that throughout this section of the Borgia, as in the almanacs, we are dealing with a world of metaphor, where the dark ball court may be less a structure physically located in a particular site than a playing ground for supernatural or cosmic battles.

Still, it is entirely possible that such metaphorical and cosmic structures did have equivalent physical manifestations in the ritual precincts of different community kingdoms. In just this way, the sacred location of Coatepec (Serpent Hill), the place of Huitzilopochtli's birth and victory over his siblings, was manifest as the pyramid of the Templo Mayor in Tenochtitlan.

Episodes

The Borgia narrative proceeds by episodes, which are opened and closed by the strip goddesses and linked by the males who pass through them. As with many creation stories, however, we should not automatically assume that the episodes are always to be read as a strict sequence. Most Aztec cosmogonies (e.g., those in the *Historia de los Mexicanos por sus pinturas* and *Histoire du Mechique*) proceed as a set of linked episodes that are not all sequential. The Maya Popol Vuh likewise begins at one point, jumps into a future time, and then returns back into the past. Mixtec genealogical histories like the Codex Bodley and Codex Zouche-Nuttall are also built of stories that are related but chronologically independent; they trace one story line to a certain point then jump back to pick up another (Rabin 1980). The Borgia sequence is fairly strong topically on the first side, with the bundle episode logically following the four-page establishment of concepts and essences. It is on the reverse side that the episodes seem to parallel each other topically, although the last is, logically, the drilling of new fire to begin a new era.

Episode 1 (the first four pages: 29–32) functions as a prologue or genesis, presenting the first acts that establish the foundation for what will follow. Emphasis is on the creation or emergence of fundamental essences, tools, and concepts. Here each full scene is contained

within each page. The action is framed by four quadrilateral goddesses and by the quadrilateral flint enclosure. It ends with the birth of Quetzalcoatl.

Episode 2 (the six-page section running from 33 to 38) establishes the black and red celestial temples and then narrates the story of the obtaining and opening of the sacred bundle. It features the black Quetzalcoatl, Tezcatlipoca, Stripe Eye, and Xolotl. The two temples are first presented on separate pages, but thereafter the material flows in a narrative across the next four pages: two pages dedicated to obtaining and opening the bundle, and two pertaining to the actions of Xolotl and others in a sacred space. Humankind and maize emerge here, to end the first side of the hide codex.

The reverse side of the codex begins with Episodes 3 and 4, which are both two-page sections. Episode 3 opens with a celestial strip goddess at the top of 39, and its complex material flows across pages 39–40. Stripe Eye and companions descend from the strip goddess into the earth, where they perform heart sacrifice on the night sun: they cut nine hearts from sun disks at the night sun's joints. Episode 4 (41–42) replaces the sacrifice of the night sun with the sacrifice of a human being. It opens with another strip goddess, from whom supernaturals again descend. The subject is the preparation for, enactment of, and result of a human heart sacrifice, detailed in stages. This is the first heart sacrifice of a human to appear in the narrative passage, coming eight pages after the first heart sacrifice of plant spirits on 33–34.

Episodes 5–8 follow, on the four last pages of the narrative (43–46). These four episodes are visually organized in similar ways and form a set that structurally parallels the first four pages of the narrative passage (Episode 1). Both sets have four pages, each with its own separate scene; there is no bridging of the interior folds as there is in Episodes 2–4, although the content of facing pages is paired. Also as in Episode 1, each presentation takes the form of a centralized composition that is framed quadrilaterally: the scenes of Episodes 5–8 are bounded either by a quadrilateral precinct or by inward-facing constructions located at the four corners. The actions on the pages concern the obtaining of maize (43), the need for blood sacrifice to ensure plant fertility (44), the Morning Star and warriors (45), and, finally, the drilling of new fire. The Quetzalcoatl with

the tricolored face paint reappears as the principal actor in the last two pages, replacing Stripe Eye and the black Quetzalcoatl. At the very bottom of page 46, he flies down through the cut in the torso of the last strip goddess to end the narrative.

Episode 1: Beginnings

The creation story opens not on day-lit earth but in the night heavens or in the relative darkness that came before the sun. On the first three pages, four scenes of beginning are framed by quadrilateral gods and goddesses in male-female alternation (Fig. 101). Their elongated bodies—formed of blood, starry darkness, and other elements—remain open at the base to allow the dynamic essences and spirits to flow onto the next scene. All the anthropomorphic figures who appear in these first scenes have clawed hands and feet and are painted in symbolic colors. I thus interpret them as essences, personifications, and anonymous agents of action, rather than as specific supernaturals or persons.

Burst of Energy The first scene is a burst of creative energy and power (Fig. 104, Plate 11). Within a large black circle, dark swirling energy explodes from a great turquoise bowl (which is anthropomorphized with round, supernatural eyes and a skeletal mouth and jaw). Seven dark, star-studded wind serpents (wearing the buccal wind mask of Ehecatl) issue from the dark mass. These dark winds, which I interpret as primordial energy, recall the Nahuatl couplet *yohualli ehecātl*, literally “night and wind,” which Sahagún (1953–1983, bk. 6:254) translates as “invisible and intangible” and León-Portilla (1963:103) reads as “the transcendence of the Divine.” It is a title or quality assigned to Tezcatlipoca and Quetzalcoatl as well as to the supreme creator force, Ometeotl.¹⁵ Born from the mouths of five of these wind serpents are five anthropomorphic wind essences, colored red, yellow, blue, white, and “dark.” They flow outward toward the four quarters, while other wind serpents and essences energetically fill the corners of the composition.

On the left and right at the midpoint of the composition, two of the wind serpents emerge from the central mass bearing a round ball of obsidian or dark stone (left) and a plant with leaves or flowers on the

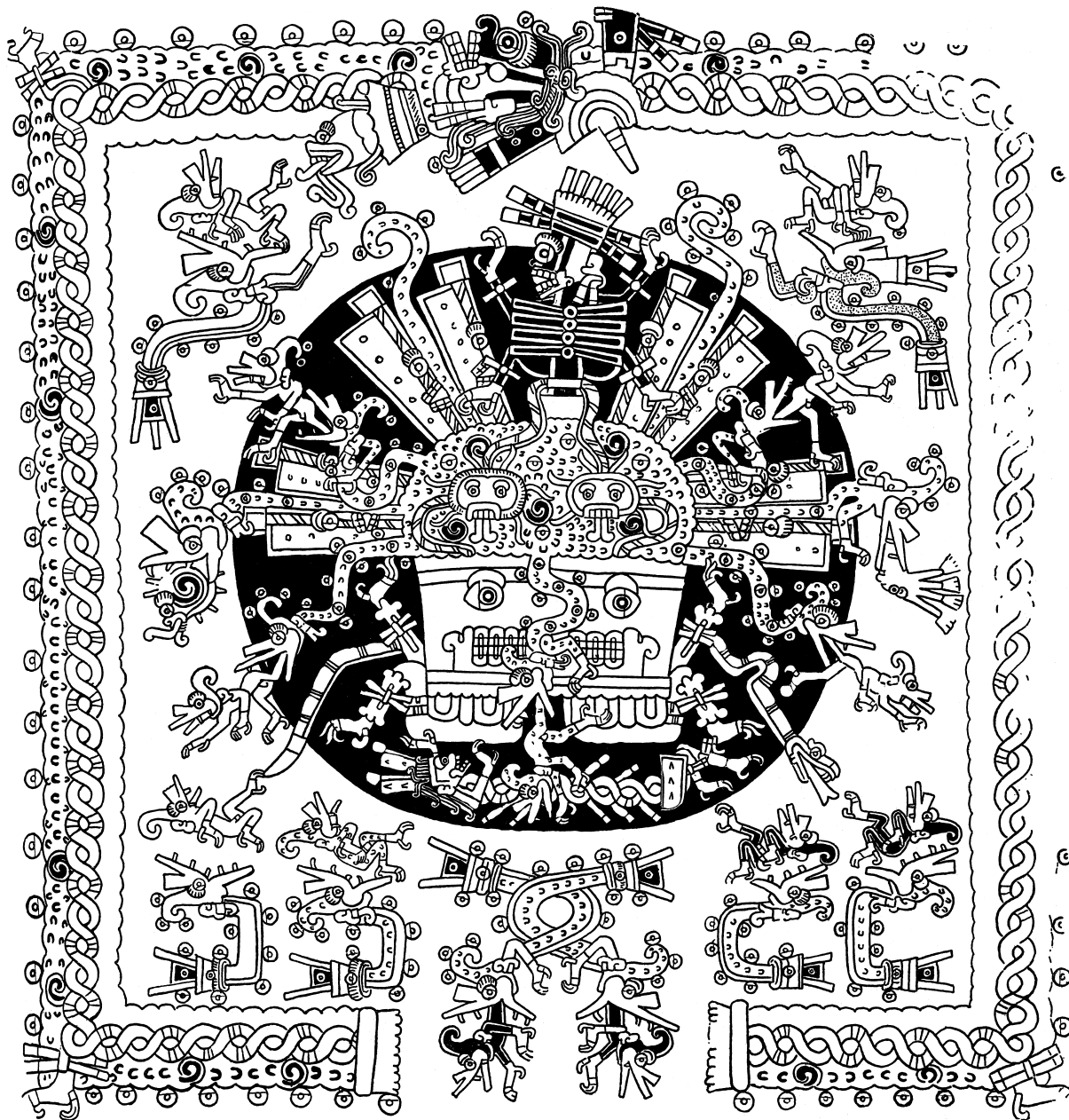


Fig. 104. Episode 1, the first burst of energy and power. Borgia 29 (from Nowotny 1961:pl. 11; reproduced with permission of Gebr. Mann Verlag).

ends of its branches (right).¹⁶ The obsidian ball and the plant seem on the surface to be an unlikely pairing, but these elements are clearly important to the story. In Nahuatl literature, stone and wood (or rocks and trees) are often linked as a couplet (Maxwell and Hanson 1992:177), and they come as a couplet in the Birth of the Uinal story in the Chilam Balam of Chumayel

(Roys 1967:116–117) to signal elements that will compose the earth. In one of the Borgia directional almanacs (52), an obsidian core and a piece of hard wood are paired as weapons or instruments of sacrifice, brought down from the heavens by the Cihuateteo and Macuiltonaleque. There may also be a more specific reading, however.

The pairing would be especially logical if the plant were a copal tree, for then we would be witnessing the creation of two elements that humans would later use in making blood sacrifice and offerings to the gods. Blood from the obsidian blade and copal incense were ubiquitous in central Mexican rituals. The plant being brought forth by the wind serpent may very well be a copal tree (*copalquahuatl*), *Bursera jorullensis*. This tree is known for its thick or swollen trunk and has leaves at the end of its branches, both of which are depicted here. When the same tree appears on the following page (30, discussed below), it additionally has secondary growth coming up from its trunk, which is also characteristic of copal.¹⁷ The flowers or leaves now colored gold or yellowish may originally have been painted in a fugitive green pigment that has now turned yellow, as have so many of the quetzal feathers and other green objects in the Borgia.

If the intent of the Borgia artist was to pair obsidian with copal, which seems likely to be the case, the scene nicely parallels the opening couplet of the cosmogony in the Mixtec Codex Vienna, where the first elements of creation are ritual voice and offering (Fig. 1). In the bottom right corner of the first page of the Vienna, two dark male figures function as anthropomorphized actions; one sings or prays with colored speech scrolls curling elaborately out of his mouth, while the other leans toward him and offers powdered tobacco, ready to spill or scatter it from his hand. These are the first ritual acts, which initiate creation and set up all that will follow. The preeminence given to the stone and plant in the Borgia suggests a similar meaning: the fundamental tools used to communicate with and activate supernatural forces are being brought forth by the wind serpents on this first page of the cosmogony.

Other creation stories speak of a deified flint or obsidian knife as an early agent in their cosmogonies. Mendieta (1971:77) tells how, at the beginning of creation, the star goddess Citlalicue gave birth to a great flint knife, which was then used to cut open the sky and allow the earth to drop. From the Maya region, the *Annals of the Cakchiquels* record how Obsidian Stone was created by Xibalbay, later to guide humans and be worshipped by them once humankind was created (Recinos and Goetz 1953:45–49).

On this first page in the Borgia, we are faced with the emergence of spirits and power, which will fill the

cosmos in its four directions. This creative act may have been engineered by the black skull-headed supernatural in birth-giving pose who hovers above the writhing mass that bursts forth from the vessel. Two spiders—perhaps celestial demons or Tzitzimime—descend from the supernatural on their white sacrificial silk cords.¹⁸ On both sides, the large white banners of sacrifice that jut out of the mass speak of primordial sacrifice. Sacrifice is also emphasized by the “ground line,” which takes the form of a twisted goddess who has sacrificial banners in her hair and forming her skirt. The themes of this first event of creation seem therefore to be the explosion and spreading of energy and sacrifice, perhaps including sacrifice potentially enacted by using obsidian and copal. At the bottom, dark wind serpents bearing black wind essences fly out of the opening in the body of the quadrilateral goddess to carry the narrative to the next event.

Birth of the Day Count The second event is the creation of the day count and thus of time itself.¹⁹ Again it is framed by a quadrilateral god, here female. The action is centered not on a circle of black but around a disk of red, here bounded and embellished like a great jewel (Fig. 105, Plate 12). Its outer border—a ring of star-studded black panels interrupted by red strips—calls to mind the black and red headdress of Quetzalcoatl and may again symbolize a time of darkness.²⁰ Inside the red disk are the two wind serpents and wind essences who came from the preceding event; the wind essences hold out newly introduced copal bags, as if they have brought copal as a sacrificial element from the preceding scene.

The twenty day signs, beginning with Crocodile in the lower right, encircle the disk in a counterclockwise direction. Each fifth day sign is ringed by a circular cartouche to mark the fourfold division of the count. At the four corners are four directional trees, personified by black figures who have fanged mouths, smoke scrolls coming out of their round “supernatural” eyes, and yellow curls and bumps issuing from the top of their head. These figures remind us of Mixtec *n̄uhū* (earth spirits), who have circular eyes, fangs, and heads characterized by “earth” bumps (Fig. 129).²¹ Here in the Borgia they hold out copal bags and pierce the four ringed day signs with bone awls.

Although this piercing action has usually been read

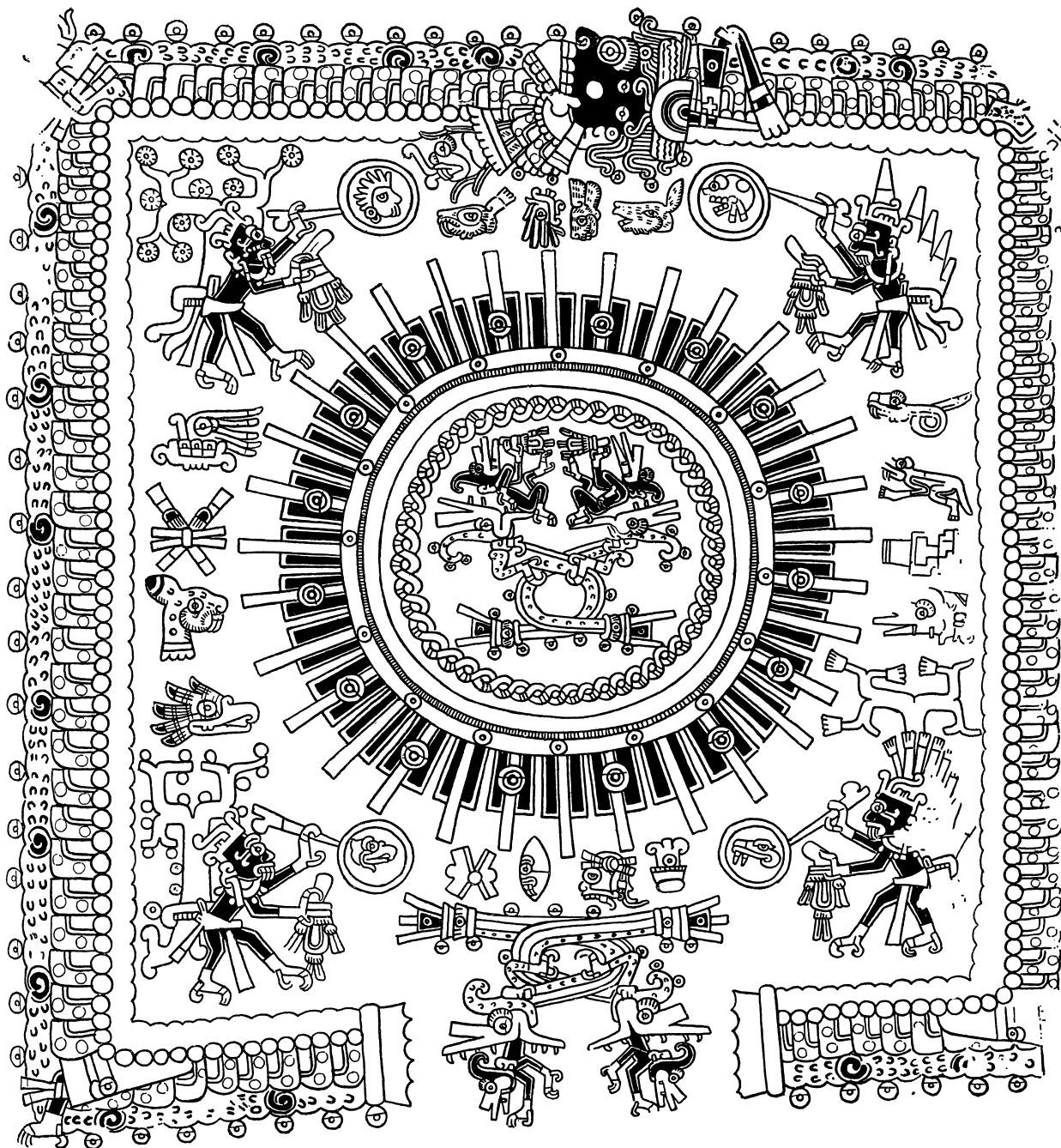


Fig. 105. Episode 1, the presentation of the twenty-day count, here animated by four personified plants. The day signs begin in the lower right with Crocodile. The plants are probably copal, maguey, ceiba, and calabash tree. Borgia 30 (from Nowotny 1961:pl. 12; reproduced with permission of Gebr. Mann Verlag).

somewhat vaguely as a scene of priestly auto-sacrifice pertaining to plants,²² this seems unlikely. The figures have the claws, round eyes, black body paint, and supernatural hair that identify them as essences or spirits. Moreover, they are clearly and intentionally piercing the day signs and not themselves. This piercing action is surely a statement of birth more than a record of self-sacrifice. In all the Mexican divinatory codices, the only other instance of supernaturals who pierce another being with a bone awl comes in the birth almanacs, where the gods pierce the eyes of newborns to symbolize their birth and first seeing (Fig. 84).²³ As explained in Chapter 5, the piercing “opens” the eyes and awakens the consciousness of the newly born.²⁴ I believe that we are witnessing an act of creation rather than an act of sacrifice, when the twenty day signs—and thus the calendar—come into being. It is on this page that the twenty day signs first appear in the narrative section, brought forth with the help of the directional trees. Here the trees are a (probable) copal, maguey, ceiba (*pochote*), and a calabash tree, which symbolize east, north, west, and south.²⁵

On the first two pages, if my interpretation is correct, we have the first burst of primordial energy and the organization of this energy in a quadripartite cosmos, the accoutrements of sacrifice, and the birth of the day count. In the Mixtec cosmogony of the Codex Vienna (52), the first events of creation are the making of offerings—in the form of song/prayer and powdered tobacco—followed by the appearance of the twenty nights and twenty days (Jansen 1982b, 1:125–127; Boone 2000b:90–91) (Fig. 1). This and the following events take place in the heavens before the sun is born. The Mixtec creation legend recorded by Gregorio García also tells how all was originally in darkness, chaos, and confusion (Dahlgren de Jordán 1954:294). The priority of the day count obtains generally in the Aztec realm, where the *Historia de los Mexicanos por sus pinturas* places the creation of the day count just after the birth of the four primordial gods, children of the creator lord Tonacatecuhtli (Garibay 1979:25); the world was still in half light before the lords of the underworld were introduced and before the sun was born. In the Chilam Balam of Chumayel (Roys 1967:116–119), the day count also came early, when the world was still in darkness and the land, sea, and heavens were unformed. Although the individual de-

tails of these stories may vary from those in the Borgia, we can recognize a generalized correlation.

Other Essences The next two quadrilateral gods frame the birth of other essences on a single page (31). These events are poorly understood but feature death-related goddesses, female personifications of maguey and *malinalli*, and maize spirits. The small twisted strip goddess with sacrificial banners on her head and forming her skirt (which we saw on p. 29) again establishes the ground of sacrifice. In the center of these quadrangles, black skull-headed spirits issue from parturient goddesses whose costume elements are associated with death, night, blood sacrifice, and Tlazolteotl (goddess of childbirth and weaving). At the corners of each rectangle, other sets of four day signs (spaced five days apart) are featured. The first goddess has Wind, Deer, Grass, and Movement (2nd, 7th, 12th, and 17th sign), and the second goddess has Lizard, Water, Jaguar, and Rain (4th, 9th, 14th, and 19th sign). The signs effectively organize the twenty-day count into four groups of five days. Seler (1963, 2:11–13) associated them with the *trecenas* rather than the twenty-day count and assigned them to the west and north, and most other scholars have followed him. Nothing on the page, however, specifies that they are *trecena* markers rather than days of the count or assigns them to the cardinal directions.

Birth of the Tezcatlipocas and Quetzalcoatl The creative acts of this first part conclude with the birth of the five Tezcatlipocas, warriors and warfare, and Quetzalcoatl (32) (Fig. 106). This takes place within a rectangular precinct whose architectural features are articulated by flints and surrounded by darkness. The flint-lined precinct recalls the House of Knives that in the Quiche Popol Vuh was the second peril faced by the Hero Twins during their descent into the underworld (Tedlock 1985:43). In this place the underworld lords expected the Hero Twins to be cut to pieces. An Aztec version of the House of Knives or flint-knife enclosure may have existed in one of the underworld layers (such as the second, third, or fourth) that are characterized by flint or obsidian pictured and described in the Codex Vaticanus A/Ríos (2r).²⁶

The Borgia presents its flint-lined enclosure as a place of both birth and death. In the red-colored center cell,

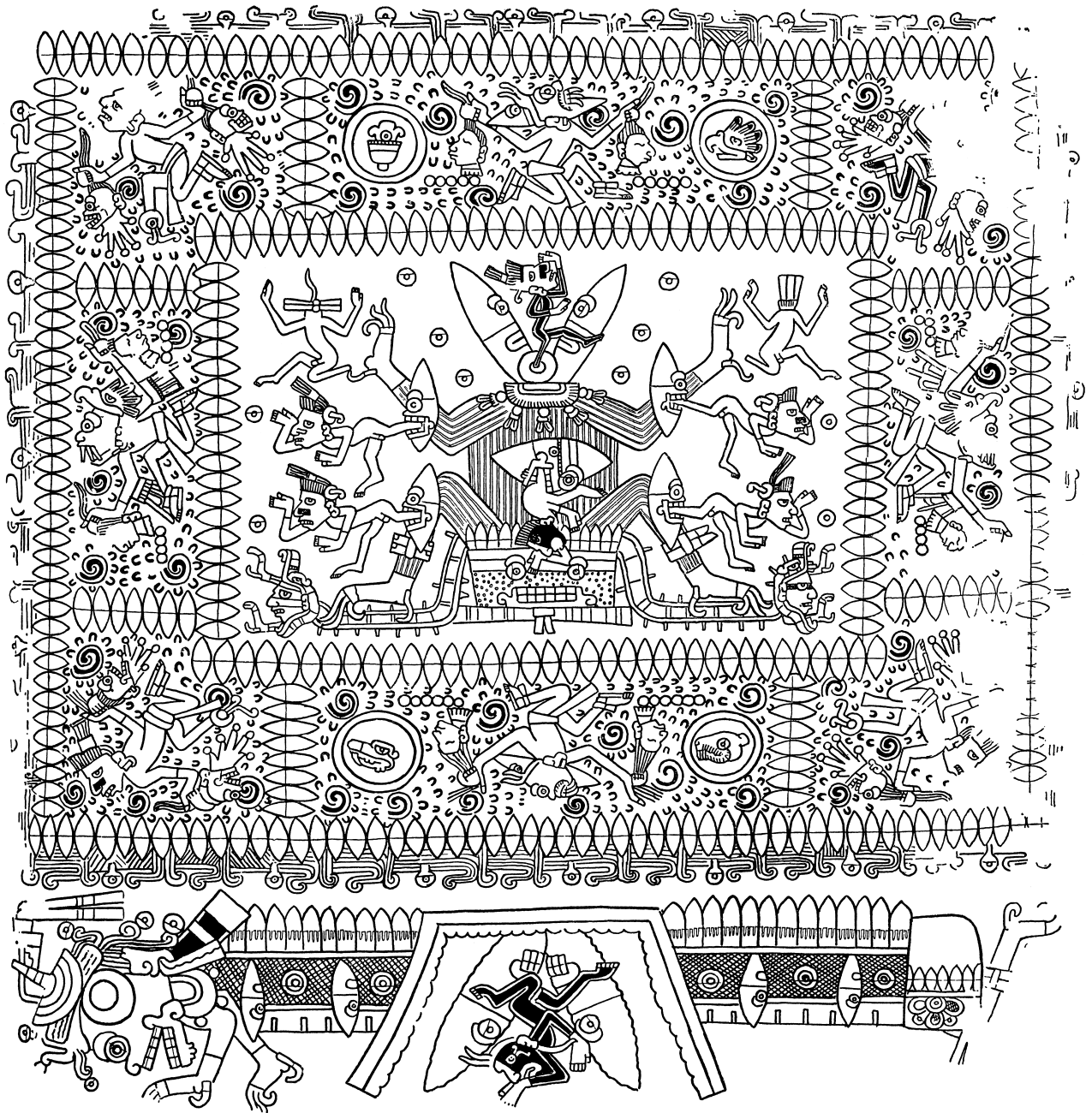


Fig. 106. Episode 1, the birth of the Tezcatlipocas, warriors, and Quetzalcoatl in the flinted enclosure, the last event of Episode 1. Borgia 32 (from Nowotny 1961:pl. 14; reproduced with permission of Gebr. Mann Verlag).

a parturient figure sits in a bowl made of bone. Red and white striped body paint marks the figure for sacrifice, and two facing flint knives replace its severed head. From the base of those facing flints and from the mouths of flint knives that appear along the figure's

arms and legs emerge five nude males. They are identified as Tezcatlipoca by the smoking mirror at the temple, and they sport the bound topknot ("pillar of hair") of accomplished warriors. These figures are colored yellow, white, black, red, and blue, to symbolize the four

directions and center, with the black Tezcatlipoca (center) emerging from the neck. In dark cells at the four corners of the precinct are other warriors, now with Tezcatlipoca's mirror replacing the right foot and now directionally colored white, black, red, and blue. They hold up two severed skeletal heads apiece. In the side panels of the precinct are fanged flint and eagle warriors—colored blue, white, yellow, and red—who brandish fleshed trophy heads.²⁷ All move about in animated pinwheels. On either side of the flinted warriors in the top and bottom panels are the day signs Serpent, Dog, Eagle, and Flower (5th, 10th, 15th, and 20th sign), which as day signs and *trecena* signs divide the calendar into four quarters. We see here the birth of the war god Tezcatlipoca in a quantity sufficient to fill the center and corners of the cosmos, the birth of warriors, and the beginning of martial conflict and human trophy hunting.

A generative flint and the birth of differently colored manifestations of Tezcatlipoca both figure in creation stories belonging to the Aztec or Nahua tradition. Mendieta (1971:77) preserves a legend about a great flint born of the celestial goddess Citlalicue; the flint was cast down at the place known as Chicomoztoc (Seven Caves, a place of origin), and from it emerged 1,600 gods (Anders, Jansen, and Reyes García 1993: 178). The *Historia de los Mexicanos por sus pinturas* (Garibay 1979:23–24) records how the creator couple Tonacatecuhtli and Tonacacihuatl begat four sons: the red and black Tezcatlipocas, Quetzalcoatl/Ehecatl, and Huitzilopochtli; it notes that the black Tezcatlipoca “was born in the middle of them all.”²⁸ As Pohl (1998: 186–188) has pointed out, the flinted enclosure and the birth of Tezcatlipoca from a flinted being remind one of the altar painting at Ocotelolco, where the face of Tezcatlipoca emerges from the open mouth of a flint that rests on a skull/bowl within a flinted enclosure (Fig. 132).

It is also on this page of the Borgia that the creator god and culture hero Quetzalcoatl makes his first appearance, born along with the Tezcatlipocas from the parturient figure. He emerges downward from the large flint at the figure's navel. His body is colored red and naked in birth, but he has the characteristic black, yellow, and red face paint of Quetzalcoatl. Like the other emergent figures, his arms are flexed and his legs bent in an animated pinwheel. Quetzalcoatl's birth

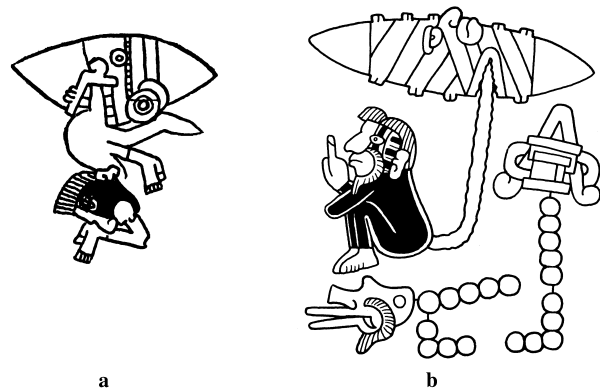


Fig. 107. a, Quetzalcoatl born from a flint in the Borgia (32). b, Lord 9 Wind (Quetzalcoatl) born from a flint in the Codex Vienna 49. Drawing by Heather Hurst.

from a flint here parallels the birth of the Mixtec version of Quetzalcoatl, Lord 9 Wind, who is born from a great flint in the opening pages of the Codex Vienna (Fig. 107). In the Vienna, the flint is animated with an eye, nose, and mouth, which qualify it as a supernatural essence, paralleling the parturient figure and flint in the Borgia. Quetzalcoatl does not otherwise participate in the action in the flinted precinct but instead moves (past two flint knives) through the opening in the strip goddess who borders the lower edge of the page. Quetzalcoatl now has smoke scrolls at the back of his eye as well as his characteristic beard.

The flinted, skeletal strip goddess at the bottom of page 32 is the first of her kind in the narrative; she signals the end of Episode 1. Quetzalcoatl, however, passes on to the next section. Although he lacks his tri-colored face paint in the following several episodes, he is manifested by the black Quetzalcoatl and Stripe Eye.

Episode 2: Temples of Heaven and Birth of the Sun, the Ritual Bundle and Birth of Humans

Episode 2, the longest and most complex in the narrative, is distinguished from Episode 1 by a shift in format and composition as well as a change in content. The six-page subsection opens with two celestial temples, each presented on a single page (33–34); in the latter, the sun is born. Then comes a four-page narrative pas-

sage (35–38) that involves the acquisition and opening of a sacred bundle followed by actions that create the rains, maize, and humankind. Here the obverse of the codex ends. It is in Episode 2 that the architectural and spatial setting seems to approximate best the physical reality of a ceremonial center (Nowotny 1961: 249–250, 2005: 271–272; Byland 1993: xxiv; Byland and Pohl 1994: 85, 156–159). We can also see a shift in the character of the actors. A few still retain the claws of the spirits and essences that populate Episode 1—and are, in fact, carryovers from that presumably earlier time—but most have human hands and feet and seem to be fully realized deities or deified beings. The action is less cosmic and more specific, and the compositions have lost the centrality and symmetry of Episode 1.

First the painter presents the two celestial temples, so identified because their roofs are striped with celestial bands of stars, Venus or Great Star symbols, and flints (Figs. 108, 109). Both are supported by a colossal serpent that winds down their height, with his head at the base and his tail at the top. The tail ends at or with a large flint at the peak of the roof, and from this flint a white sacrificial cord descends, bringing celestial or sacrificial elements. The Black Temple (Fig. 108) is marked by a black post, lintel, and undulating serpent, and its roof is conical like the Wind Temple of Quetzalcoatl/Ehecatl. In contrast, the Red Temple (Fig. 109) has a red post, lintel, and serpent, and its rectangular roof has downward-pointing projections or “ears” on the gable ends. Both temples are grounded on spiked, anthropomorphic earth bands and have males and females related to fire (Xiuhtecuhtli and Chantico figures) along their pyramid platforms.

Although several scholars have suggested that these celestial structures may represent actual buildings,²⁹ it is more likely that the structures are to be read metaphorically, given the cosmological nature of the Borgia. On the roof of the Black Temple are nine recumbent males with the face paint of Venus (top two figures) or the fire god (others) and the white hair and feather tuft more usually associated with sacrificial victims. They are likely the deified souls of dead warriors, who accompanied the sun from dawn to noon.³⁰ The Red Temple has ten recumbent Cihuateteo (souls of women who have died in childbirth), who accompanied the sun from noon to sunset. This pairing suggests an af-

finity between the Black “wind” Temple and the eastern heavens or morning sky, and between the Red Temple and the west or afternoon,³¹ although red is the color more commonly associated with the east. In any case, the temples represent complementary spheres that are roofed by the star-filled heavens, which are occupied by the spirits of deceased males and females.

The dual serpents recall one of the creation stories in the *Histoire du Mexique* (Garibay 1979: 108), which tells how Tezcatlipoca and Quetzalcoatl descended from the heavens, transformed themselves into two great serpents, and then together tore apart the earth monster. This is not to say that these Borgia serpents and their temples necessarily represent Quetzalcoatl and Tezcatlipoca but to note that complementary descending serpents play an active role in some creation stories.

Around the top of the Black Temple, creative acts continue (Fig. 108). Four essences of rubber (colored directionally) are born from a large rubber ball on the upper left, while on the upper right a fire is drilled on the chest of Tonacatecuhtli to release directionally colored essences of fire.³² Just below this, a barely visible corn goddess or essence lies in wait, covered by a cloak. The white cord that descends from the temple’s peak brings with it a series of heavenly and religious elements: the lunar rabbit, the solar deer, jade, the bent staff of Quetzalcoatl, bloody maguey spines, the white banner of sacrifice, and the white down-ball of sacrifice. A spider on the end secures the analogy between the cord and a spider’s silk. White sacrificial cords like this appear in the Mixtec historical screenfolds, where they drop from the heavens bearing supernaturals who carry downward the elements necessary for the establishment of polity in the area (e.g., Zouche-Nuttall 18, 19). In the Vienna cosmogony (48), Lord 9 Wind Quetzalcoatl descends from such a cord fully bedecked with his costume elements and the accoutrements of political power (Fig. 110), and Mendieta (1971: 82) records an Aztec legend in which Tezcatlipoca descends from the heavens to the earth via a cord made of spider silk. In the Borgia the cord brings items that humans will need to worship the gods, although humans have not yet come into being.

The actions below set the stage for the emergence of the sun later on the next page. In front of the Black

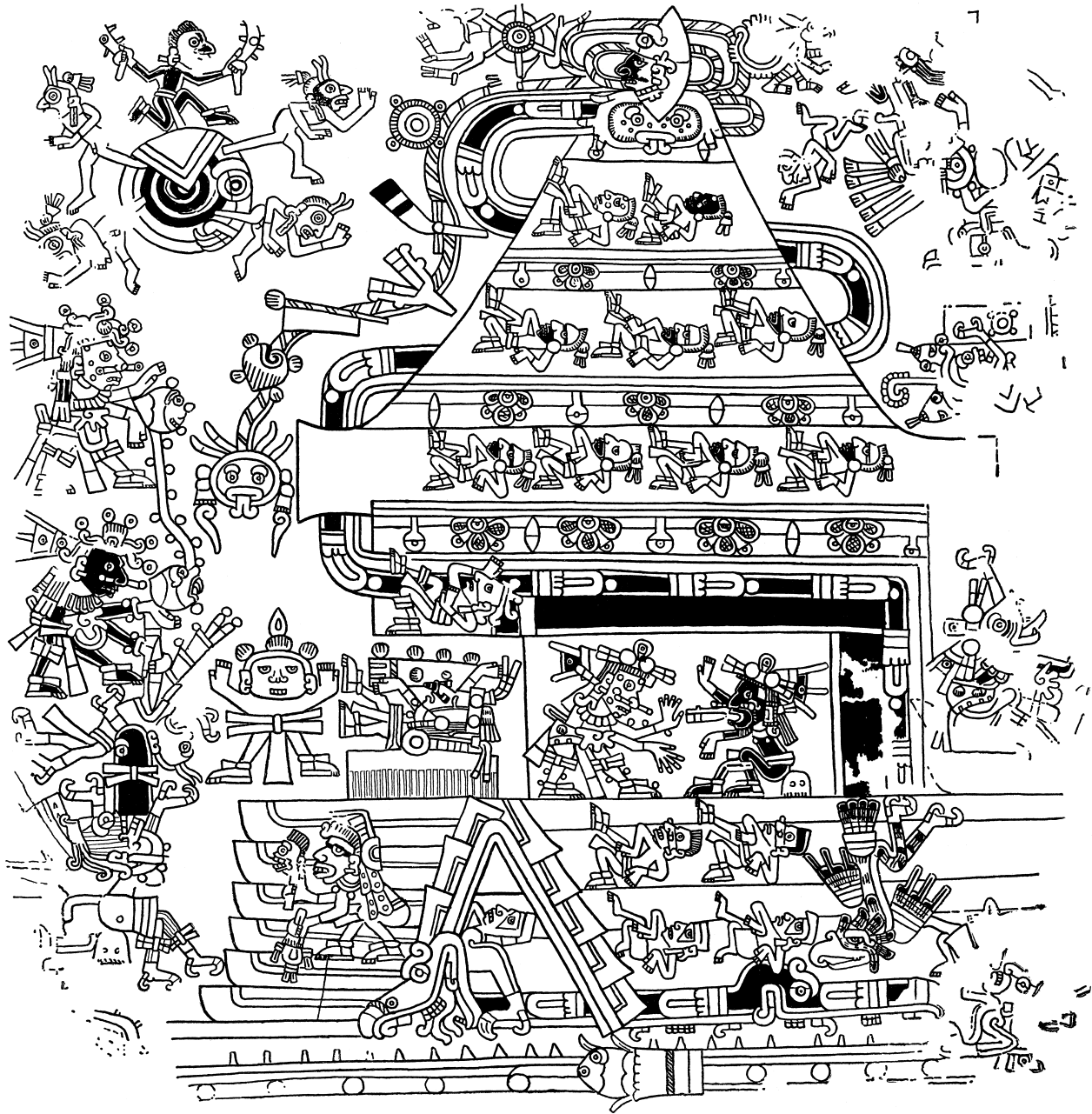


Fig. 108. Episode 2, the Black Temple, with Venus, the black Quetzalcoatl, and primordial sacrifice. Borgia 33 (from Nowotny 1961:pl. 15; reproduced with permission of Gebr. Mann Verlag).

Temple, Venus and a black Quetzalcoatl cut out the heart of one of the earth spirits from Episode 1; the personified maguēy from Episode 1 supports the stone on which the act takes place. The liquid that spews forth with the heart is striped rather than blood red,

because this is a primordial, prehuman sacrifice. Some Aztec and Maya creation stories explain that humans were created in order to make sacrifices to the gods and serve them (Mendieta 1971:78; Tedlock 1985:34, 78–80, 167). The *Popol Vuh* (Tedlock 1985:34, 83–86), in

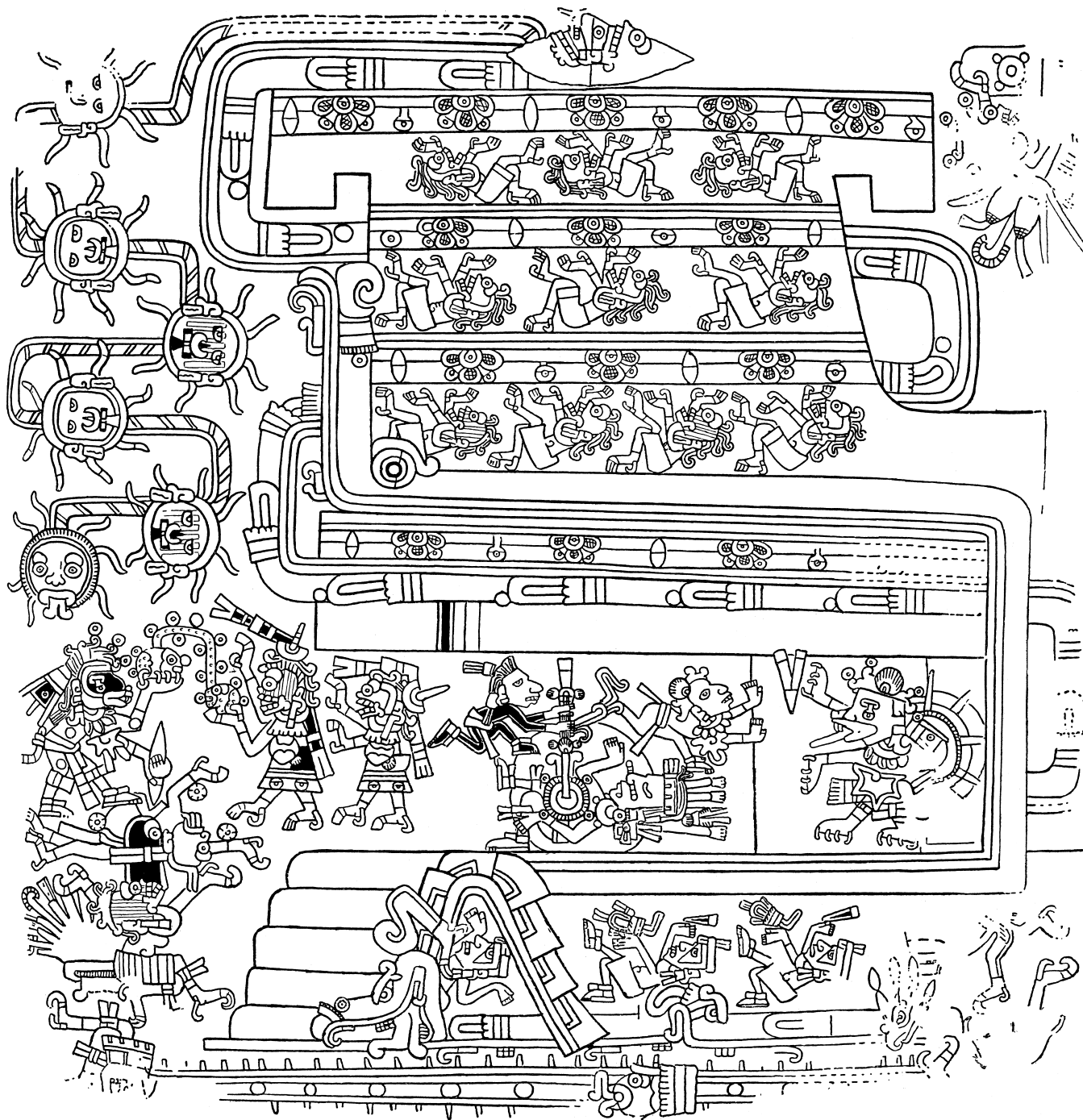


Fig. 109. Episode 2, the Red Temple, with the birth of the sun and another primordial sacrifice. Borgia 34 (from Nowotny 1961:pl. 16; reproduced with permission of Gebr. Mann Verlag).

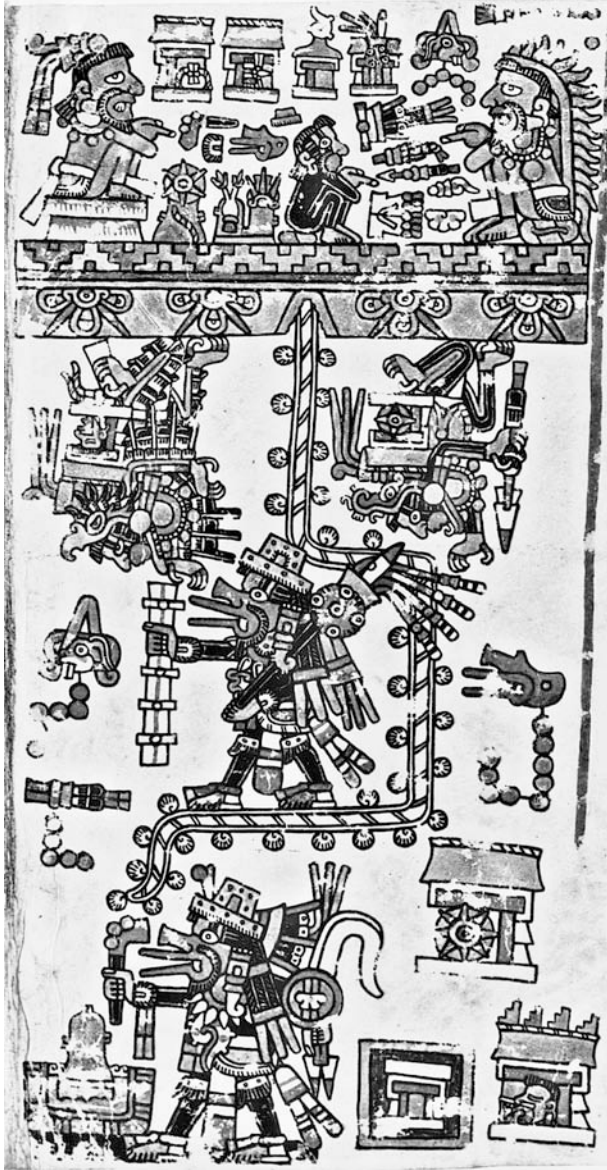


Fig. 110. Lord 9 Wind (Quetzalcoatl) descends from the heavens via a sacrificial cord. In the heavens above, he is given his regalia and attributes by two creator gods; when he descends, he and companions bring these accoutrements down to earth. Vienna 48. Photograph courtesy of the Österreichische Nationalbibliothek, Vienna.

particular, tells that protohumans and those who came before were unable to do this properly. This nonhuman blood in the Borgia may refer to such a primordial but imperfect sacrifice.

Inside the sanctuary itself, Venus approaches the black Quetzalcoatl in apparent supplication. This interaction and their act of heart sacrifice may be the agents that will help the sun to emerge on the next page, for at the front of the temple's lintel is a recumbent male that I interpret as the youthful sun. He is larger and posed differently than the other recumbent males, and he has the red and yellow face paint and curly red hair of solar beings. He reappears, born of the smoke from a new fire, on the next page. Around the temple other supernaturals seem to be waiting for active roles: just outside the sanctuary Xipe Totec lies covered by a red cape; in the upper right corner a corn goddess lies covered; and behind the temple a black Xolotl waits.

In the sanctuary of the Red Temple on the next page (34) the sun is finally born (Fig. 109). Against the background of a solid red disk, a black warrior drills a fire on the chest of Tonacatecuhtli, lord of our sustenance, and from the smoke emerges a red curly-headed solar being. Immediately to the right, the being is enthroned in the temple. He now has canine claws and feet, a canine mouth mask, and a distended eye that identify him as a red Xolotl, and he bears the sun on his back. This birth of the sun is less dramatic than Sahagún's (1953–1982, bk. 7:3–7) detailed account, for here the sun is simply drilled into being. But Sahagún describes the sun as red when it first breaks over the horizon, and the red disk behind the drilling may refer to such a burst of red at the first dawning. Xolotl also plays a role in two of the legends about the sun's creation, but he figures differently in each. Sahagún (1953–1982, bk. 7:8) describes how, when the gods were asked to sacrifice themselves in order to start the sun on its journey across the sky, Xolotl fled and hid.³³ In contrast, Mendieta (1971:79) assigns to Xolotl the honor of orchestrating that mass sacrifice himself. In either case, Xolotl figures prominently. In the Borgia, the red Xolotl *is* the sun.

In front of the temple another primordial sacrifice takes place. This time it is the personified *malinalli* plant from Episode 1 who supports the sacrificial stone, and it is the personified ceiba tree from Episode 1 that is sacrificed. The sacrificer, a black Xolotl, hands the bone-

colored heart to two female death spirits, who also come from the first episode. These ancient beings, like the earlier heart victim, are holdovers from the most ancient times. Above the sacrifice, spiders with the face paint of Tlazolteotl descend from the white cord; they are probably stellar beings. Meanwhile, in the upper right, the goddess or essence of corn still lies waiting, covered by a cloak.

Following this presentation of the two great celestial temples and the birth of the sun, a four-page narrative sequence begins in a place of darkness and ends in a light-filled ritual space defined by the same two temples. The main protagonists—for in this second part of the narrative sequence we can speak of specific supernaturals—are the black Quetzalcoatl, Tezcatlipoca, Xolotl, and Stripe Eye; all wear costume elements of Quetzalcoatl and seem thereby to be aspects of him. The first two-page spread (35–36) describes how the black Quetzalcoatl and Tezcatlipoca go into the darkness to obtain a sacred bundle and then how they open it and release its tremendous power (Fig. 111). A great dark current of wind and power from the bundle carries Stripe Eye, and implicitly Xolotl as well, across the outer page fold and into the day-lit ritual space of the next two-page spread. In this space bounded by the two celestial temples (37–38) Xolotl brings down lightning, the rain gods become active, and humankind is born (Fig. 112).

The story of the bundle begins in the upper left of page 35 in a quadrangle of darkness (Fig. 111). There the black Quetzalcoatl from the earlier Black Temple (33) draws blood from his penis to feed the four spirits of the night. Colored black, white, red, and blue, these nocturnal spirits sit at the corners of their quadrangle to symbolize the night's four directions. This sacrifice is an act of supplication to Yoaltecuhtli, the god of night and darkness, from whom Quetzalcoatl will get the bundle. Yoaltecuhtli sits enthroned in his great dark temple on the right side of the page, and the bundle smolders on the platform just outside the sanctuary's entrance. The black Quetzalcoatl, now riding on the back of an eagle, is joined by a companion—a Tezcatlipoca who wears the wind mask and the shell pectoral and necklace of Ehecatl. Together they face Yoaltecuhtli and request the bundle. The night lord grants their wish, and the black Quetzalcoatl carries the bundle on

his back as he and Tezcatlipoca/Ehecatl journey along a blue road that winds down the page.³⁴ The black Quetzalcoatl also holds ritual implements (a maguey spine and copal bag), while the Tezcatlipoca/Ehecatl is fully armed (shield, spears, spearthrower) as his protector. The painter pictures them twice on the road to show their progress.

The road passes by a dark rectangle on the left. It is the subterranean place of the creator god and prototypical priest Cipactonal, who is so identified by his face paint, snaggletooth, crocodile skin, and the priest's tobacco gourd on his back. On the right side of the blue road is the ball court of Cipactonal, bordered by a frame of darkness and here partitioned and colored according to the four directions. On the court Yoaltecuhtli plays ball with Stripe Eye; this is Stripe Eye's first appearance in the narrative.

At the end of the blue road, the bundle is opened on page 36. Tezcatlipoca/Ehecatl (still armed) is present, but the black Quetzalcoatl has been replaced by Stripe Eye and the black Xolotl who first appeared with the black Quetzalcoatl on page 33. These are slightly different manifestations of Quetzalcoatl. The bundle—oriented sideways on the page and surmounted by what may be a trapezoidal box and a flute—opens with an explosion of power, even more powerful than the burst of energy on the very first page of the narrative. Surrounding the bundle is a great quivering circle of darkness that erupts with undulating wind serpents and streams of energy. Eight wind serpents, each with the red mask of the wind god, spring from the mass, and from their open mouths come elements essential to life and ritual: paper streamers, maguey, corn, an eagle, *malinalli* or another herb, jade, blood, and water.³⁵ These eight elements in turn give birth to eight obsidian spirits: nude males with pointed caps and smoke scrolls at their eyes who emerge from the elements. Twelve other serpentine ribbons of dark energy flow out around the eight elements; they end in differently colored hummingbirds.

Much of the bundle's energy is concentrated in a great flow of dark wind/power that spews from the top of the bundle, pushes around the edge of the page, and moves across the page fold, down the left side of page 37, and onto page 38. It carries along Stripe Eye and a host of other elements useful in ritual contexts, includ-

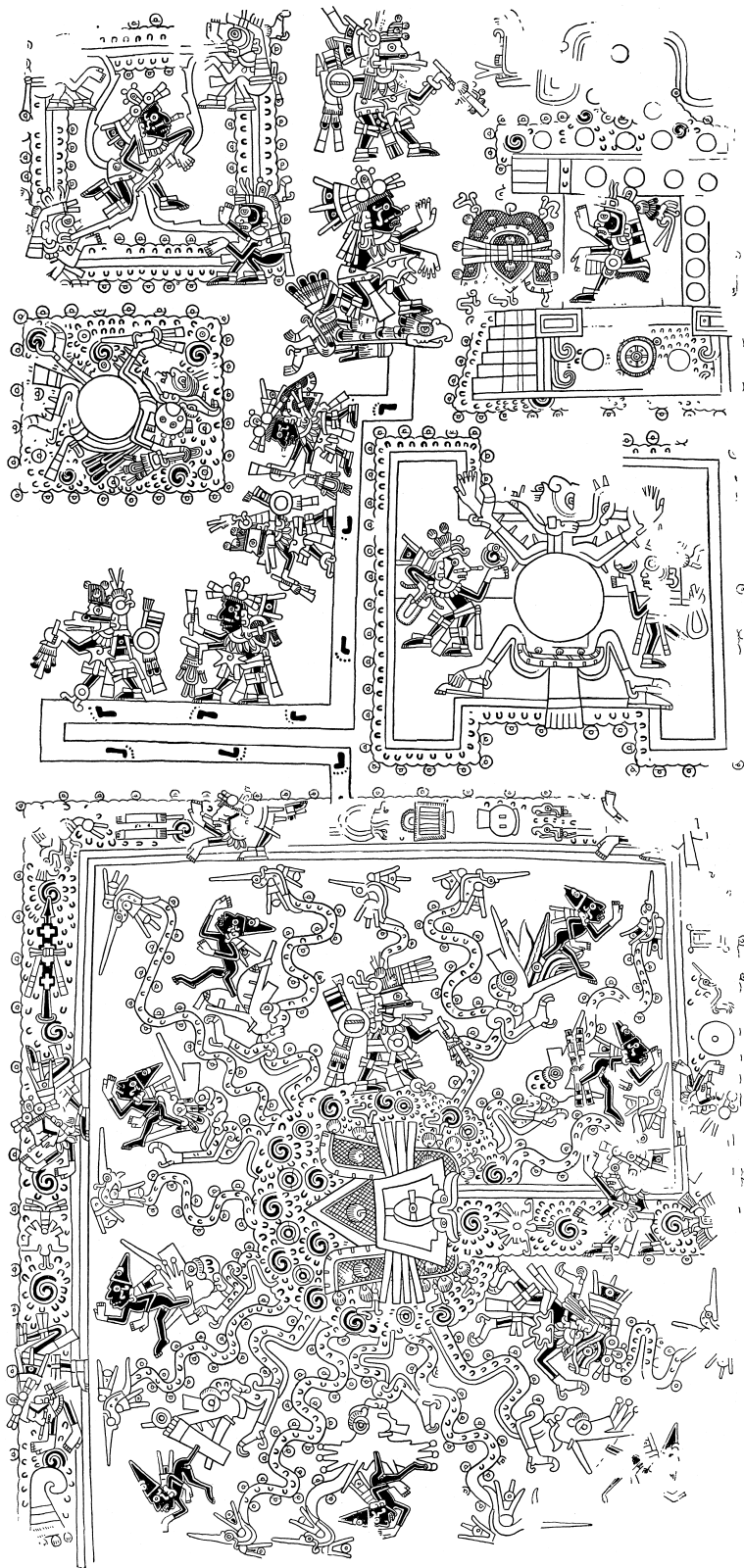


Fig. 111. Episode 2, Tezcatlipoca and the black Quetzalcoatl obtain and open the ritual bundle. It explodes with power that carries Stripe Eye onto p. 38. Borgia 35–36 (from Nowotny 1961:pl. 17; reproduced with permission of Gebr. Mann Verlag).

ing butterflies, birds of various kinds, flowers or jewels, flutes, an olla, the tricolored rectangle (red, black, white) of the maize gods, staffs, and the like. Stripe Eye, his eyes closed as in death, sleep, or a trance, is repeated five times in the flow. The flow finally ends in the head of the wind god Ehecatl, from whose mouth Stripe Eye, his eyes now open, finally emerges (Fig. 112).

This travel or descent into darkness—whether it be the night or the underworld—recalls episodes in several Aztec and Maya creation legends, although it does not exactly parallel any one of them. According to the *Leyenda de los Soles* (Bierhorst 1992:145–146), the creation of humans was accomplished through the actions of Quetzalcoatl, who descended into the underworld to obtain the bones of the dead from Mictlantecuhtli.³⁶ But first Quetzalcoatl had to blow music from a solid conch shell, which he was able to do after worms perforated the shell and bees entered it. He quickly ran off with the bones but was pursued by Mictlantecuhtli's messengers, who dug a ditch into which Quetzalcoatl fell and broke the bones. Xolotl, his canine companion and “twin,” came to his rescue, and the pair took the bones to Tamoanchan, where Cihuacoatl put them in a jade bowl and ground them into a meal. Quetzalcoatl and the assembled gods then drew their own blood and sprinkled it over the meal to create a dough, which became the first humans.

The *Histoire du Mechique* (Garibay 1979:106) and Mendieta (1971:78) record virtually the same story in less detail, except that in these accounts it is either Ehecatl or Xolotl acting alone who descended to obtain the bones.³⁷ The *Histoire du Mechique* names Ehecatl as the protagonist, whereas Mendieta names Xolotl. Both gods, of course, are aspects of Quetzalcoatl. Mendieta says that Xolotl then nursed the first boy and girl with the milk of the thistle. A cosmogonic legend from the province of Chalco, recorded in the *Histoire du Mechique* (Garibay 1979:110), identifies Tezcatlipoca and Quetzalcoatl as the gods who created humankind, although it does not elaborate on their actions.³⁸

Although the Popol Vuh of the Quiche Maya has an entirely different version of the creation of humankind, it does record the descent of the Hero Twins into the underworld, where they repeatedly tricked and thereby defeated the underworld gods (Tedlock 1985:134–147). A striking feature of their story is that they repeatedly played ball with the lords of Xibalba, just as Stripe Eye

in the Borgia Codex plays ball with the lord of darkness, Yoaltecuhtli.

When he emerges from the Wind mouth at the end of the current of power, Stripe Eye enters a light-filled ritual space that spans pages 37–38 (Fig. 112).³⁹ The Red and Black Temples frame the space at the top end. On the left is the “eared” Red Temple, in which Xochipilli or a red solar deity—no longer a red Xolotl—is enthroned; he blows a flute (perhaps the flute from the bundle) and beats a precious drum, thereby creating the first music in the narrative (Taube 2001:114–115).⁴⁰ On the right is the Black “wind” Temple, in which a black Xolotl (badly damaged) sits holding out a shield and weapons. The Black Temple is here manifest as a Temple of Lightning (of fire and brilliance) because of the dark mirrors and serpents and the curls of fire on its roof (Seler 1963, 2:33). At the top edge of the page, four manifestations of Quetzalcoatl or four beings who wear Quetzalcoatl's costume (including Tezcatlipoca on the far right) sit holding accoutrements for offerings: maguery spines and incense bags. Their offerings seemingly contribute to, or may activate, the actions below. Meanwhile, Xochiquetzal and a Tlaloque stand in front of the Black Temple and present other offerings to Xolotl within.⁴¹

Xolotl then descends along a blue road that runs from this temple to a small platform on page 38, where he dances. This road passes by a larger platform (p. 37, just to the right) on which Xolotl stands and throws lightning from a fire serpent. He is there surrounded by other figures and framed by four differently colored circles that enclose four spirits of lightning. Xolotl thus descends to bring down lightning from the heavens and extend it to the four quarters of the cosmos.

This episode seems to represent the beginning of lightning and, by extension, rain, for Tlaloc-like figures appear for the first time in this scene. One Tlaloc, who has the skin and helmet of the earth crocodile, stands at the shore of a body of water, perhaps a river, in the lower left of page 38. In the water, a skeletal personification of water-tolerant trees and plants—so identified by the *abuehuete* (bald cypress) that grows from his ear, the other tree from his rump, and the water lily (?) from his nose—has taken the curved black and white staff of Quetzalcoatl and seems to have cut the Tlaloc who stands above him.⁴² Blood gushes from Tlaloc's mouth, implicitly to nourish the river. We may well be

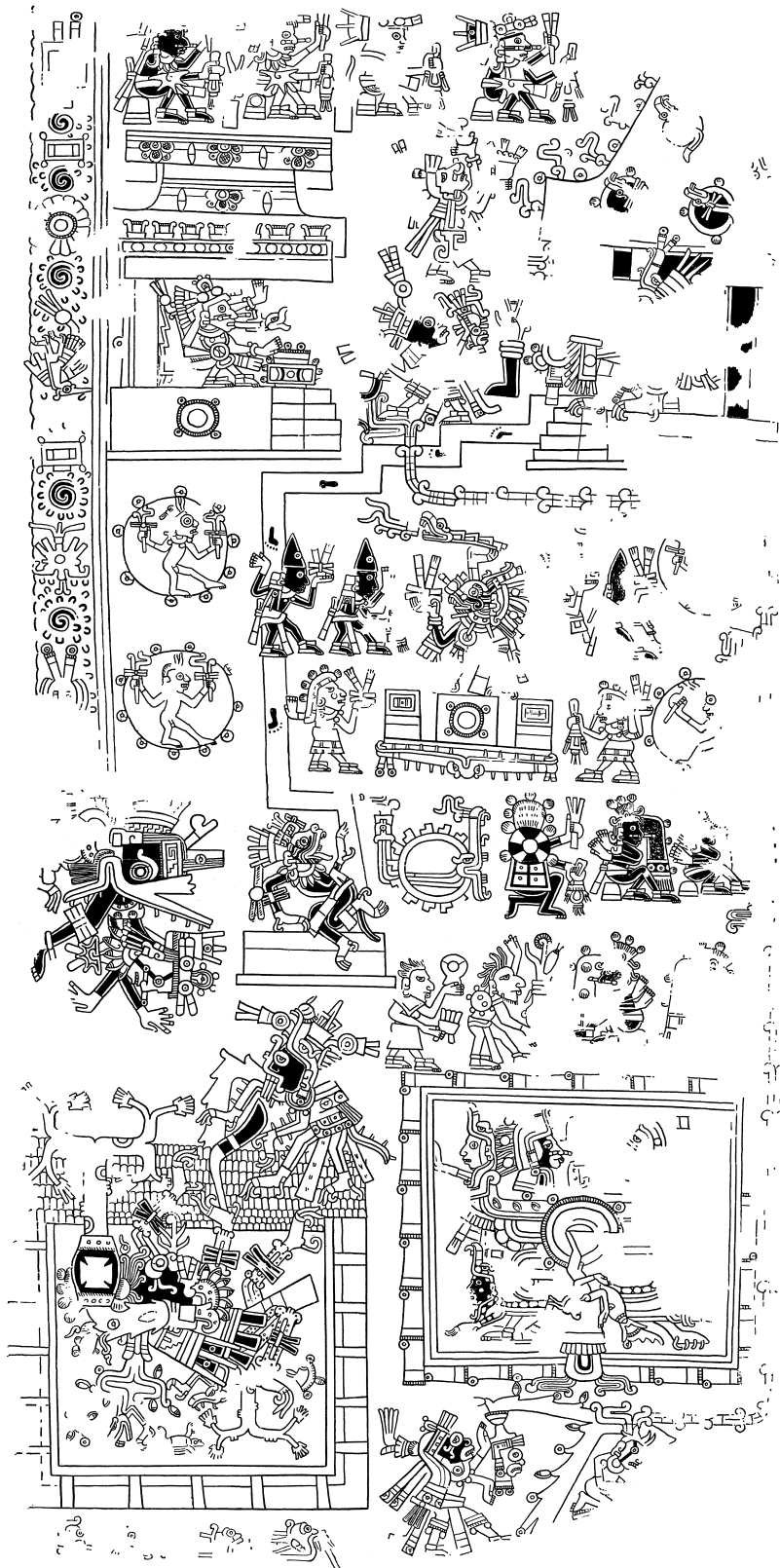


Fig. 112. Episode 2, Stripe Eye (*mid left*) arrives in the sacred space occupied by the Red and Black Temples (*top left, right*). Xolotl descends with lightning from the Black Temple, and the rain gods are active. In the lower right corner, humankind is born. Borgia 37–38 (from Nowotny 1961:pl. 18; reproduced with permission of Gebr. Mann Verlag).

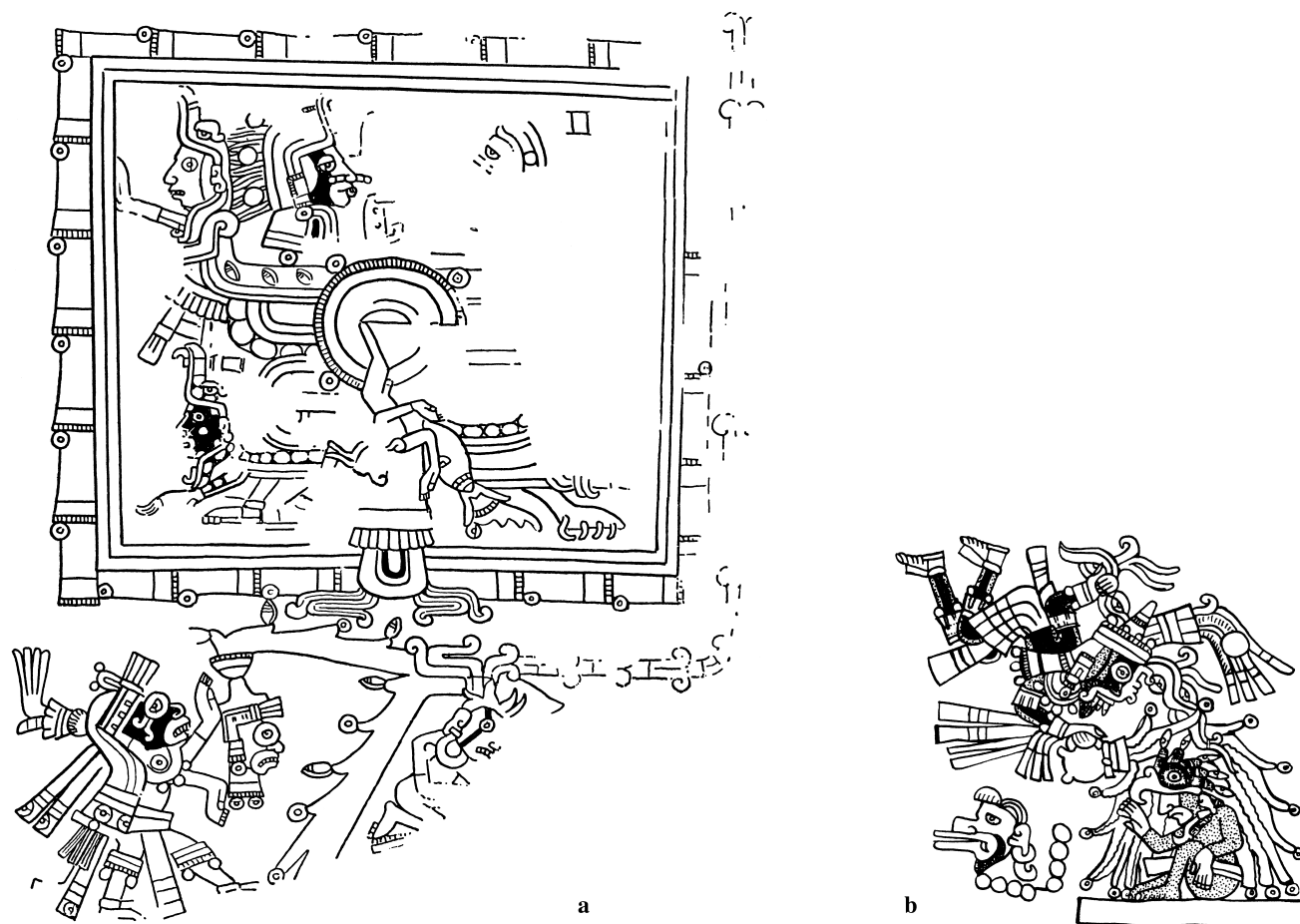


Fig. 113. **a**, The first human is born from the procreating couple and is washed by the rain god. Borgia 38. **b**, the rain god washes the supernatural ancestor Lord 8 Wind, seemingly to make him fully human. Codex Zouche-Nuttall 5 (from Anders, Jansen, and Pérez Jiménez 1992b: drawing p. 5; reproduced with permission of the Akademische Druck- u. Verlagsanstalt).

seeing the basis of a legend about the coming of the rains to replenish the groundwater and feed the water plants.

In the very bottom right of page 38 a Tlaloque pours water over a crouching nude male who has the face paint of Stripe Eye (Fig. 113). The nude male must be hot, because steam from the water poured over him rises along the right side of the page all the way up to the Black Temple, where it enters the incense pan (only barely visible) that another (or the same) Tlaloque holds in his right hand. This Tlaloque has a rain-god effigy vessel in his raised left hand and thus presents steam (clouds) and water to Xolotl, bringer of lightning.

This crouching male at the bottom of the page is not simply a denuded Stripe Eye; his body is flesh-colored, and his hair is blond, in contrast to Stripe Eye's black body and hair. Moreover, the act of washing and his nudity strongly suggest his identity as a newly born human. The scene finds a parallel in the opening pages of the Codex Zouche-Nuttall (Fig. 113b), where the rain god is shown pouring water from a handled jug over Lord 8 Wind, the supernatural ancestor whose emergence from the earth on the canonical beginning date *yī Reed dī Crocodile* is the first event in the codex. This "baptizing" of Lord 8 Wind has been interpreted as his transformation from a supernatural to a "fully human being" able to marry and have children.⁴³

In the Borgia, the progenitors of this first human are pictured just above him in a square, jeweled enclosure that is filled with blood. There a barely visible male and female embrace in a sexual union. The male (facing right) has the snaggletooth, beard, and clawed hands and feet that identify him as one of the old creator gods, either Tonacatecuhtli or Cipactonal, but jaguar spots around his mouth also suggest he could be Tepeyolotl; the female opposite would then be Tonacacihuatl, Oxomoco, or Chalchiuhtlicue.⁴⁴ The male also has the angled stripe at his eye.

The union itself is obscured from view by four directionally colored serpents, but the center is marked by a great jade disk. From this jade emerges a nude male, flesh-colored with blond hair (Fig. 113a). Behind him is a pendant, tab-like symbol of preciousness flanked by two ears of maize. Scrolls of steam come from the bottom of the tab. Anders, Jansen, and Reyes García (1993:221) interpret this scene as the birth of the young maize, personified by the nude male. Taube (1986:62), however, has proposed that it pictures the creation of humankind from maize and blood, and I think he is correct. The ears of maize do not issue directly from the human figure; rather they complement and flank it just as the two flints flank Quetzalcoatl when he flies through the first strip goddess on page 32. And the washing scene just below is more appropriate for the birth of the first human rather than maize.

Several features recall aspects of different stories about the creation of humankind. The Popol Vuh, for example, tells how humans were made from maize dough (Tedlock 1985:163–164), and we note the ears of maize on either side of the emerging male. Although the Aztec *Leyenda de los Soles* (Bierhorst 1992:145–146) has humans made from the bones of the ancestors, these bones were ground in a great jade bowl; the jeweled square enclosure in the Borgia may represent just such a jade bowl, now filled with the sacrificial blood that watered the ground maize/bones. We should also not forget that most Aztec accounts place the actual creation of humans in a place of origin after one or another aspect of Quetzalcoatl has descended into and emerged from the underworld—a parallel to the events on pages 35–36. The *Anales de Cuauhtitlan* says that Quetzalcoatl made humankind out of ashes (Bierhorst 1992:25). An alternative legend, preserved in the *Historia de los Mexicanos por sus pinturas* (Garibay 1979:110),

says that humans were born from the first couple, Cipactonal and Oxomoco, the ancient pair who are also pictured in the Borgia standing just above the jeweled enclosure, where they hold forth offerings. Facing them on the right are four sacrificial victims, covered by directionally colored cloaks. As a semidivine creator couple, Cipactonal and Oxomoco are later, more human, equivalents of Tonacatecuhtli and Tonacacihuatl.

Even more suggestive of a new human birth is the appearance of the crouching nude male just below the jeweled enclosure at the very bottom right of the page. He and the male creator above him share the angled black stripe at the eye, which claims a relationship. The Tlaloque (rain spirit) pours water on him, effectively washing him, just as all newborns are washed shortly after birth.

The Borgia, then, seems to be illustrating the birth and subsequent washing of the first human. Accordingly and logically, a rain spirit washes this first human, who is hot from birth (López Austin 1988, 1:210–211, 259). The steam from the first washing rises up to fill the incense pans of the rain gods—and, metaphorically, to create the rain clouds. This steam/smoke/cloud is then offered to Xolotl, who descends with lightning. Meanwhile, the spirit of the water plants draws blood from Tlaloc to feed the wetlands. With this birth and the actions of the rain gods, the obverse side of the codex ends. The narrative has heretofore activated the cosmos and organized it both directionally and temporally. The world has begun to be articulated by means of sacred locations, rituals, and the deeds of supernaturals, who initiate primordial sacrifice and bring forth the sun. Creator gods then bring cult and human beings into the world.

Episode 3: Heart Sacrifice of the Sun

On the reverse side of the Borgia, the narrative then picks up again and continues for its final eight pages.⁴⁵ The content of the reverse is divided into a series of six distinct episodes: the first two flow across two-page spreads, and the last four fill a page each. The meaning of several of these episodes is not well understood.

Episode 3 begins with a strip goddess at the top of the page (39), through which a Quetzalcoatl figure enters the scene below (Fig. 114). Next comes the descent of Stripe Eye and Xochipilli, accompanied by a

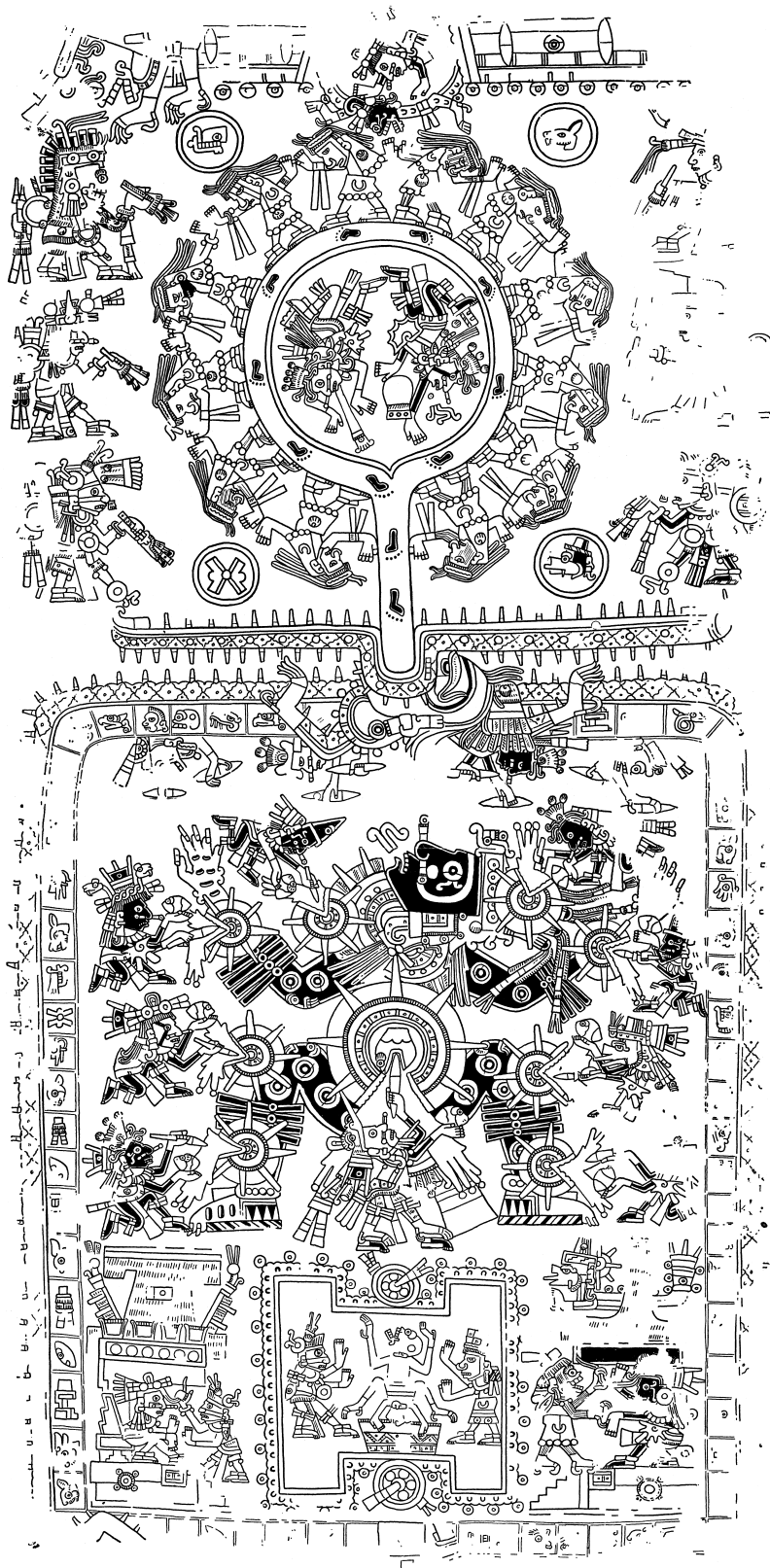


Fig. 114. Episode 3, descent into the earth, heart sacrifice of the night sun, and a stillborn birth in the dark ball court. Borgia 39–40 (from Nowotny 1961:pl. 19; reproduced with permission of Gebr. Mann Verlag).

host of women dedicated to Tlazolteotl, into the body of Cipactonal (representing the earth), where Quetzalcoatl-related males cut nine hearts from the body of an enormous black sun god. At the bottom, the Black and Red Temples reappear, as does the dark ball court first seen in the realm of Yoaltecuhtli on page 35. The occupants of the Red and Black Temples are taken captive by others. Inside the dark ball court a stillborn birth occurs.

The action begins with Stripe Eye and Xochipilli, who fly downward in a red disk, like a womb. They bear an olla or drum and a long trumpet, and they sing as if to gladden the sun on its descent into the underworld at dusk.⁴⁶ Surrounding them on a blue road are twelve women dedicated to Tlazolteotl (Anders, Jansen, and Reyes García 1993:222), who are directionally colored red/black, yellow, white, blue, and red. On either side are six deities, each paired with the one on the side opposite it: the black Tezcatlipoca in the lower right, paired with the red Tezcatlipoca in the lower left; a black death lord on the right, paired with Tepeyollotl opposite; and a solar or fire deity in the upper right, paired with Tlahuizcalpantecuhtli in the upper left. Four day signs in medallions are Wind, Deer, Grass, and Movement (the 2nd, 7th, 12th, and 17th signs).

The blue road carries Stripe Eye and Xochipilli into the open mouth of the earth crocodile. Here the crocodile has the long white hair, yellow face, and red arc around the eye that identify him as Cipactonal, who is pictured with these features when he earlier appears in the realm of Yoaltecuhtli on page 35 (Fig. 111). Cipactonal's lips are elongated into the wide, toothy maw of the crocodile that signals an entrance into the earth. The painter shows four gods actively passing through his skin: the black Quetzalcoatl, Xochipilli, and two skeletal females; all carry flint knives.

Inside the earth, a great black sun (the night sun) crouches in the so-called birth-giving pose common to earth lords. The spots (pustules?) and bumps on his hands and feet identify him as Nanahuatzin, the pustule-covered god who leaped into the fire to become the sun, according to the legend recorded by Sahagún (1953–1982, bk. 7:3–7). His eyes are open, and he is speaking or singing, even though nine aspects of Quetzalcoatl—or nine black males wearing some of Quetzalcoatl's costume elements—are cutting hearts out of the nine sun disks on this body.⁴⁷ Stripe Eye,

wearing a hummingbird helmet, pierces the heart in the middle of the largest sun, which is at the sun god's navel. Blood spurts forth at all the cuts.

Below this dramatic scene, the Black and Red Temples reappear (Black on the right and Red on the left, as they were in the sacred space on pp. 37–38). In the Black Temple, a skeletal Tlazolteotl takes the black Quetzalcoatl captive. In the Red Temple, a red Tezcatlipoca takes Xochipilli captive. These captors reappear in the dark ball court between the temples, where they face a red, skull-headed creature who gives birth to a dead human. Although this parturient one is not marked as being female, it seems nevertheless to represent a stillbirth where the mother also died. According to Sahagún (1953–1982, bk. 6:167), women in labor were equated with warriors doing battle; when they gave birth they “captured” a child just as a warrior captures an enemy. The two capturing scenes in the Red and Black Temples, where the captors are a skeletal Tlazolteotl (goddess of childbirth) and the red Tezcatlipoca (patron of warriors), may reflect this pairing. If the birthing mothers died in the process, they became like dead warriors, companions of the sun. Their souls become the Cihuateteo, who make their appearance on the next page.

All around these interior scenes, day signs framed by red cells line the inside of the earth's crocodile skin. Although many of these signs have been abraded away, most have been reconstructed; they read in two separate sequences, beginning with Cipactonal's head at the top center and continuing down the two sides of his body. The visible signs on the right begin with Wind, partially hidden behind and just to the right of Cipactonal's head (the first sign, Crocodile, is entirely hidden unless it is signified by Cipactonal's head itself) and progress sequentially down the right side to end below the ball court; after the twentieth sign, Flower, they repeat as far as the thirteenth sign, Reed.⁴⁸

The signs on the left do not follow such a simple sequential order, however, and scholars have reconstructed the abraded signs in several different ways (Table 13). But none of these reconstructions is entirely satisfactory if the intent of the painter was to have a patterned sequence. Díaz and Rodgers (1993:pls. 39–40) followed Kingsborough's reconstruction but unfortunately omitted a cell on the side and added days that Kingsborough did not attempt to re-create at the

Table 13. RECONSTRUCTIONS OF THE DAY SIGN SEQUENCE THAT RUNS DOWN THE LEFT SIDE OF CIPACTLI'S SKIN, BORGIA 40

VISIBLE	K	DR	S	N	AJRG	M	B
X ⁱ	—	—	—	—	—	11	—
16	16	16	16	16	16	16	16
1	1	1	1	1	1	1	1
6	6	6	6	6	6	6	6
11	11	11	11	11	11	11	11
16	16	16	16	16	16	16	16
X	1	1	2	2	2	1	1
X	6	6	7	7	7	6	6
X	12	— ⁱⁱ	12	12	12	12	11/12
17	17	17	17	17	— ⁱⁱⁱ	17	17
2	2	2	2	2	2	2	2
X ^{iv}	7	7	7	7	7	7	7
12	12	12	12	12	12	12	12
17	17	17	17	17	17	17	17
2	2	2	2	2	2	2	2
8	8	8	8	8	8	8	8
13	13	13	13	13	13	13	13
18	18	18	18	18	18	18	18
X	3	3	3	3	3	3	3
8	8	8	8	8	8	8	8
13	13	13	13	13	13	13	13
18	18	18	18	18	18	18	18
3	3	3	3	3	3	3	3
8	8	8	8	8	8	8	8
14	14	14	14	14	14	14	14
X	—	18	19	19	19	19	—
X ^v	—	—	—	—	—	4	—
X	—	8	4	4	4	9	—

Table 13. CONTINUED

VISIBLE	K	DR	S	N	AJRG	M	B
X	—	13	9	9	9	13	—
18 ^{vi}	18	18	14	14	14	18	18
X	—	3	19	19	19	3	—
X	—	8	4	4	4	8	—
X	—	14	9	9	9	14	—
X	—	18	14	14	14	19 ^{vii}	—

Note: Kingsborough 1831–1848, 3:pls. 75–76 (K); Díaz and Rodgers 1993:pls. 39–40 (DR); Seler 1963, 3:pls. 39–40 (S); Nowotny 1961:250 (N); Anders, Jansen, and Reyes García 1993:224 (AJRG); Milbrath n.d. (M); and Boone (B).

ⁱ Empty cell in bend of Cipactli's arm.

ⁱⁱ Díaz and Rodgers did not allow space for this cell.

ⁱⁱⁱ Anders, Jansen, and Reyes García skipped this sign.

^{iv} Sign seems to combine elements of Deer (7), Dog (10), and Jaguar (14).

^v Probable cell behind Cipactli's knee, to parallel the cell behind Cipactli's knee on the right side.

^{vi} Looks very much like Flint (18).

^{vii} After this last sign, Milbrath (n.d.) proposes an additional 10-day interval (i.e., 4th, 9th signs hidden behind and beside the red rectangle that marks the center of the frame) to reach a 178-day eclipse cycle.

bottom of the page. Nowotny (1961:250, 2005:272) and Anders, Jansen, and Reyes García (1993:224) generally followed Seler's (1963, 3:pls. 39–40) slightly different reconstruction. Milbrath (n.d.) has proposed another that approaches the signs as signifying intervals of days that add up to a 178-day eclipse cycle.

The sequence of most of the signs proceeds in what seems to be a complex pattern in which the twenty-day count is represented by sets of four day signs (each five days apart) that repeat or partially repeat, with a six-day interval added between most of the sets. The first set includes Crocodile, Death, Monkey (1st, 6th, 11th, 16th), beginning with Vulture as the first visible sign.⁴⁹ The next set is Wind, Jaguar, Grass, Movement (2nd, 7th, 12th, 17th), beginning with either Grass or Movement. The third set is Rabbit, Reed, Flint, House (8th, 13th, 18th, 3rd). Jaguar follows, to begin the hypothetical fourth set of Jaguar, Rain, Lizard, Water (14th, 19th, 4th, 9th), which would turn the lower left corner and extend along the bottom edge of the page. Almost all of these bottom signs are too abraded to identify, however, and the previously established pattern seems to break down. The meaning of the individual signs and their patterning is not known.

Indeed, the meaning of the entire episode is perplexing. The artist shows us the descent of Stripe Eye and Xochipilli, surrounded by goddesses of childbirth, into the earth. These goddesses prefigure the Cihuateteo (in the next episode), who were said to accompany the sun on its journey from noon to sunset (Sahagún 1953–1982, bk. 6:161). Within the bowels of the earth crocodile, the night sun (in earth lord pose) is sacrificed nine times over (yielding nine hearts) but still lives and breathes. The ninefold sacrifice makes sense, of course, because nine is the number of the layers of the underworld and of the Lords of the Night. We are probably witnessing the trials of the sun once it sets into the underworld.⁵⁰ Aztec creation stories tell how the gods sacrificed themselves to create the sun and set it on its course, but here it is the sun itself that is sacrificed and yet continues to live. Then, presumably after the sacrifice, the descending pair occupy the Black and Red Temples, respectively. They are captured by a skeletalized Tlazolteotl and the red Tezcatlipoca (symbolic female and male warriors), who will confront, or already have confronted, a stillborn death in the dark ball court. The death in the ball court may represent the ultimate sacrifice that women make when

they, like defeated warriors, die in childbirth. If so, this death presages the sacrificial death of a male that follows.

Episode 4: Human Sacrifice

Visually, this episode (Fig. 115) parallels the previous one, for both begin with a strip goddess, span a two-page spread, have the top page dominated by action in and around a circle with flanking files of deities on the edges, and have a lower scene that takes up part of the first page as well as all of the second. In both, the Black and Red Temples and the dark ball court make their appearance. Episode 3 presents the sacrifice of the night sun and a parturition death, and Episode 4 presents in detailed stages the sacrifice of a human: the first human sacrifice to appear in the narrative section. Here it is, appropriately, Mictlantecuhtli, rather than Quetzalcoatl, who emerges from the strip goddess at the top to orchestrate death.

First we are shown the descent of Tezcatlipoca, flanked by two of the women dedicated to Tlazolteotl from the previous episode, all framed by darkness. The women bear offerings: including bowls containing frothy liquids (pulque?) and the arm of a clawed supernatural. Four figures flank them on the sides, walking along parallel blue roads: on the right is the future sacrificial victim (top) preceded by the red Tezcatlipoca; on the left is Stripe Eye led by the black Tezcatlipoca. The victim has the shell pectoral, ear ornaments, and black and red headdress fan of Quetzalcoatl, but other elements point to death and sacrifice. Specifically, he has the long, curly hair and the red-spotted white body paint associated with the dead and has a great down-ball of sacrifice on his head; additionally, the black vertical stripes of his face paint link him to Itztlacoliuhqui, god of sacrifice. Below these four, on and off the roads on either side, are four Cihuateteo, here colored directionally.

The two parallel roads converge on a great circular disk or hearth in which the creator pair Tonacatecuhtli/Tepeyollotl and Chalchiuhtlicue sit facing each other. They are fed by the penis blood being drawn by the victim and a black Quetzalcoatl just below. At the base of the disk, the victim seems to dance with two nude women. This may well depict the sexual license granted to those intended for sacrifice.⁵¹

Around the disk are four day signs (Deer, Rain, Monkey, and House), with a fifth (Eagle) inside. The signs here should be read not as day signs but as *trecenas* signs, because they read sequentially and are iconographically logical only as *trecenas*. As *trecena* signs, they implicitly carry the coefficient 1, as 1 Deer, 1 Rain, 1 Monkey, 1 House, and 1 Eagle (initiating the 2nd, 7th, 11th, 15th, and 19th *trecenas*). These are the five days on which the Cihuateteo descend to bring harm to children and those at the crossroads. The four day signs outside the circle probably relate to the directionally colored Cihuateteo on either side. The sign [1] Eagle may have been placed closest to the creator pair, because 1 Eagle is also the day name of the aged Mixtec goddess associated with groundwater, sweatbaths, and procreation (roughly equivalent to the Aztec Chalchiuhtlicue and Toci-Tlazolteotl), who is sometimes linked to the western direction.⁵²

A thirteen-day count runs horizontally (right to left) just below the great circular enclosure. It begins on the right with the fifteenth day sign, Eagle (thereby repeating the sign in the enclosure), and proceeds to Deer (7th sign) on the left, but it actually ends in Rabbit (8th sign), which is located below the others just on the other side of the interior fold; Rabbit is also encircled.⁵³ If [1] Eagle is the day on which the victim and the black Quetzalcoatl offered their blood to the couple, then this lower count names the intervening days between this event and the next, which comes on [1] Rabbit, thirteen days or a *trecena* later.

This carefully timed event is the heart sacrifice of the victim. Stripe Eye cuts out the victim's heart and holds it forth, while the copiously flowing blood feeds Tezcatlipoca on the left. The sacrifice takes place on a broad platform between the Black and Red Temples. But first, if we can detect sequence, the victim is taken by Stripe Eye down to the dark ball court (center right), where he is defeated. A blue road leads from the Black Temple (on the right), where Stripe Eye is enthroned, to the ball court just below, where the victim is roundly beaten—"stoned" with rubber balls and playing sticks by four black Quetzalcoatl figures. This may metaphorically stand for a warrior's defeat on the battlefield, for the dark ball court consistently is an arena for conflict and mock battle. Once the heart sacrifice itself has been completed, the victim follows another blue road that leads from the sacrificial platform left

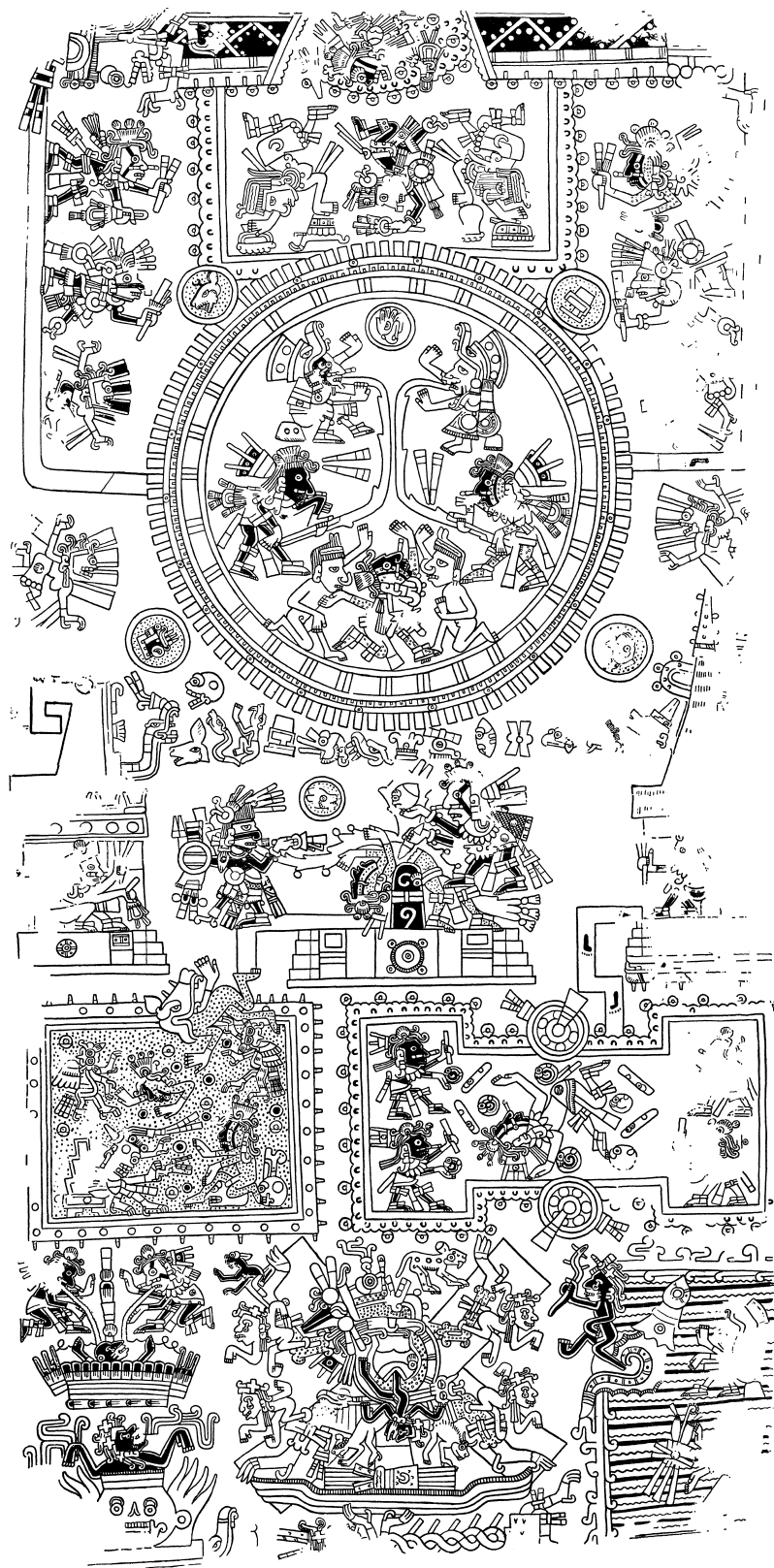


Fig. 115. Episode 4, the first human sacrifice (*center*), its stages detailed, and the birth of the Macuiltonaleque (*bottom*). Borgia 41–42 (from Nowotny 1961:pl. 20; reproduced with permission of Gebr. Mann Verlag).

and down into the earth. The earth is bounded by the skin of the crocodile, and the victim visually enters the earth monster's mouth. Within this dark space, occupied by screech owls and bones, the victim is greeted by Mictlantecuhtli, lord of the dead.

Finally, a resurrection of sorts occurs at the bottom of the page, where the now-skeletonized victim assumes the birth-giving pose and gives birth to various creatures. He poses on the perilous crossroads, the arms of which are directionally colored. From his joints and torso emerge five deformed figures, all with extruded eyes, a white cross on their wild "night" hair, and all directionally colored yellow, (fugitive) green, red, blue, and black. A curious group of animals also emerges: a jaguar, black hare or squirrel, raccoon, peccary, serpent, and centipede. All are creatures of the underbrush, and most of evil omen.⁵⁴ On the right, another deformed figure (here with the white hand painted on his mouth like Macuilxochitl) is born from a great conch shell that floats in a body of water inhabited by the same creator couple who drank blood in the circular enclosure above. On the left, another such deformed figure simmers in a great olla, while a third floats in the liquid of a *cuauhxicalli*, from which Stripe Eye and the black Quetzalcoatl drink. Blood offerings and human sacrifice have seemingly allowed these figures to come into being. Anders, Jansen, and Reyes García (1993:231) identified these deformed males as Tonaleque, deceased warriors who are dedicated to the sun.⁵⁵ They can also be called Macuiltonaleque because of the white hand painted around their mouths. In two almanacs that follow the narrative passage, the Macuiltonaleque are paired with the Cihuateteo (47–52; see Figs. 70, 71, Plate 7).

Although details of this episode remain enigmatic, its basic scenario is fairly clear. Two aspects of Quetzalcoatl (Stripe Eye and the black Quetzalcoatl), the two Tezcatlipocas (red and black), and a single human victim come out of the darkness and into a realm of the Cihuateteo. In a circular enclosure, the black Quetzalcoatl and the victim offer their blood to a divine creator couple, as the victim prepares for his death. They do this on the day 1 Eagle, which is one of the days when the Cihuateteo descend and the Mixtec day name of the progenitrix. Thirteen days later, on 1 Rabbit, the victim's heart is cut out, but not before he is defeated in the dark ball court. He descends into the underworld

and is greeted by Mictlantecuhtli. Finally skeletonized, the victim gives birth to the Tonaleque and creatures of the underbrush, while other Tonaleque emerge or figure in sacrificial contexts. As the first human sacrifice recorded in the narrative section, the episode stands as a prototype for heart sacrifice in general.

Episode 5: Acquisition of Maize

The complex choreography and multipart action of the last two episodes give way to two simpler presentations in the next two pages. On page 43, Stripe Eye flies through a strip goddess to encounter a great quadrangle whose frame is punctuated with red sun rays and multicolored ears of maize (Fig. 116). Seler (1963, 2:48) called it the House of Sun and House of Maize. Inside is a great, black anthropomorphic sun, similar to the black sun who was sacrificed nine times on page 40, for he has the spotted (pustule covered?) and bumpy skin of Nanahuatzin.⁵⁶ Here, however, he also has the distended eye and canine snout of a black Xolotl. In this respect, he is related to the black Xolotl who, at the beginning of Episode 2, cut the heart from a ceiba spirit in front of the Red Temple on page 34. It was then that the sun was born as a red Xolotl.

Beneath this sun-bearing Xolotl/Nanahuatzin lies the source of maize—a nude corn goddess who has star symbols on her body and, like the Tonaleque on the previous page, has white crosses in her night hair.⁵⁷ Ears of corn ooze from her body. On either side, two goddesses with infants on their backs tip over their grinding bowls and spill out the jeweled, precious flour that they have just ground. Above them, bowls of corn feed four male gods; and at the top, wider bowls of foaming corn feed Tezcatlipoca and the black Quetzalcoatl, who stand on jaguar and eagle thrones. These two gods must represent the warriors, not only because of their jaguar and eagle thrones but also because in front of their bowls (on either side of Xolotl's snout) are symbols of war: the shield, spears, and banners. At the bottom of the page, through the opening in the quadrangle, a black figure carries away a bag of maize. Thus, in this place of maize and sun, we find the night sun in the form of Nanahuatzin/Xolotl and the fertile goddess of maize. There gods and warriors feed easily on the abundant, precious maize. One individual manages to carry some of it away.



Fig. 116. Episode 5, in the precinct of maize and sun rays (the realm of the night sun), maize feeds the gods and warriors and is carried off for humans (*bottom*). Borgia 43 (from Nowotny 1961:pl. 21; reproduced with permission of Gebr. Mann Verlag).

This episode parallels very closely the account of the bringing of maize, recorded in the *Leyenda de los Soles* (Bierhorst 1992:146–147). The story tells how Quetzalcoatl transformed himself into a black ant and, thus disguised, went into the Mountain of Sustenance to bring out the kernels of corn. “Then [Quetzalcoatl] carries them to Tamoanchan. Then the gods chew them

and put them on their lips.” Quetzalcoatl tried to carry the Mountain of Sustenance but could not, so Nanahuatzin struck the mountain; and all the Tlalocs stole the food, not only maize but beans and other grains. The Mountain of Sustenance in the *Leyenda* could well have been visualized as a maize-studded and sun-studded quadrangle, wherein lay the maize goddess.

The gods who chewed the corn in the legend may be the four gods and two warrior gods who are pictured in the Borgia eating the maize, and Nanahuatzin appears in the Borgia as the night sun.

Episode 6: Blood Nurtures Xochiquetzal, The Birth of Flowers

Episode 6 also has a parallel in the sixteenth-century alphabetic texts, but the fit between text and Borgia image is much less tight. In the *Codex Magliabechiano* (61v; Boone 1983:206), the second annotator records a myth about the creation of flowers. A bat is born from the semen of Quetzalcoatl. The bat then goes to Xochiquetzal while she is sleeping and bites a piece out of her vulva. When the gods wash the piece of flesh, only malodorous flowers come from the water; but when the bat takes the flesh to Mictlantecuhtli (the lord of the underworld), who washes it, only fragrant flowers emerge. This is an odd story, but one that shares some of its odd features with Episode 6 on Borgia 44 (Fig. 117).

In this episode Stripe Eye enters through the strip goddess at the top to face a multicolored quadrangle, with openings on all four sides. Flowers line the outside of the quadrangle, and flints line the inside; in the walls are severed body parts. The flints, body parts, and structural composition of the enclosure recall the flint enclosure on page 32, in which Quetzalcoatl and the Tezcatlipocas were born from flints (Fig. 106). Indeed, the four day signs that mark that earlier enclosure also mark this one; the signs are Serpent, Dog, Eagle, and Flower (5th, 10th, 15th, and 20th). A concordance between the two enclosures is thus being established, although this second one is characterized by both flints and flowers. Because the first flinted enclosure was clearly in darkness, this second one probably also exists in the underworld.

Inside the enclosure of flints and flowers, the goddess Xochiquetzal lies on a ground created by a small strip goddess. From a heart in the middle of the sun at her navel grows a multicolored flowering plant.⁵⁸ Its branches hold a hummingbird with the face and head-dress of the black Quetzalcoatl. Above, a bat enters the quadrangle, flanked by four hummingbirds that attempt to feed on him as if he were full of sweet nectar. The bat carries a heart and brings with him a co-

pious flow of blood that pours over Xochiquetzal in two great streams. The blood is exceedingly precious, to judge by the proliferation of large and small jades and disks of preciousness in it. The bat brings blood to nourish Xochiquetzal, who gives birth to a multicolored flowering plant, which must represent the full corpus of flowering plants.

This visual presentation does not coincide exactly with the Magliabechiano legend, but they share significant features. These include the unity of a bat with Xochiquetzal and the birth of flowering plants from Xochiquetzal in what may be an underworld location. This enclosure is likely to be Tamoanchan, "place of the flowering tree," the mythical paradise in which Xochiquetzal dwelt (Muñoz Camargo 1998:165; Garibay 1964–1968, 1:96; López Austin 1993:64, 1997:84–85, 118). In the pictorial codices, Tamoanchan is usually symbolized by such a precious, multicolored tree (López Austin 1997:84–120).

The rest of the episode in the Borgia is enigmatic. At the sides and bottom openings are an eagle, jaguar, and quetzal, who bite at the nose of the face in the mouth of three serpents: a Venus serpent (right), a fire serpent (left), and a precious serpent (bottom). They may be aggressively attacking the serpents or defending the center of the quadrangle from the serpents' entrance.⁵⁹ In either case, the meaning of this act accomplished by these beings eludes us for the present.

Episode 7: The Morning Star

Episode 7 pertains to Venus as Morning Star, to militarism and warriors associated with him, and to the starry sky before dawn (Fig. 118). Through the strip goddess at the top of page 45, a dark wind serpent enters the space, carrying a large white banner of sacrifice. The space is defined at the four corners by four Eagle Houses—temples or palace structures whose roofs are qualified by eagles or eagle down. Two (in the upper left and lower right) have dark interiors. Inside all four are figures of Quetzalcoatl with the beard, tricolored face paint, and smoke scrolls behind the eye, who has now reappeared as an actor; they sit on red thrones that signify rule. In the upper left Eagle House, he is covered by a cloak; in the upper right, he drinks a white foaming or cottony substance from two footed bowls.⁶⁰ Seler (1963, 2:58) interpreted these to be the

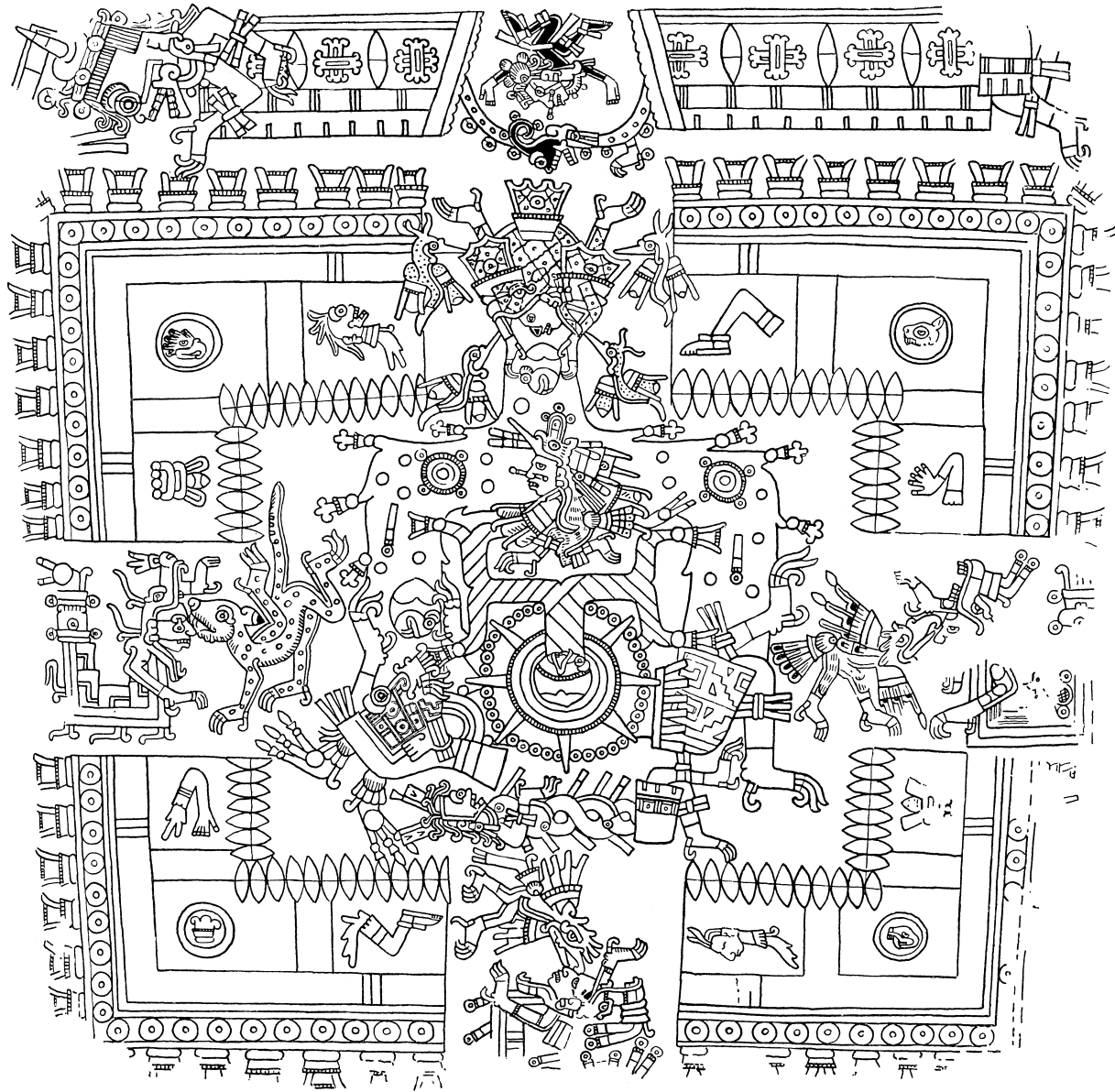


Fig. 117. Episode 6: in the precinct of flints and flowers, Xochiquetzal gives birth to flowering plants when nurtured with blood and hearts brought by the bat. Borgia 44 (from Nowotny 1961:pl. 22; reproduced with permission of Gebr. Mann Verlag).

Eagle Houses of warriors, but Anders, Jansen, and Reyes García (1993:238) read them as Eagle Houses wherein local lords reigned; the buildings may well be both.

Tlahuizcalpantecuhtli, Venus as the Morning Star, dominates the center of the composition, where he moves or dances on a skull rack which rests on a small strip goddess. Armed, he is poised with his spear-

thrower back, ready to throw. According to the *Anales de Cuauhtitlan* (Bierhorst 1992:36–37), when Tlahuizcalpantecuhtli rises in the east as Morning Star he attacks and brings harm to different entities, as pictured in the Venus almanacs on Borgia 53–54 (compare Figs. 90, 91). Here on page 45, he has no definite target but brings a more generalized threat. The symbol for war and a severed arm appear in front of him on the

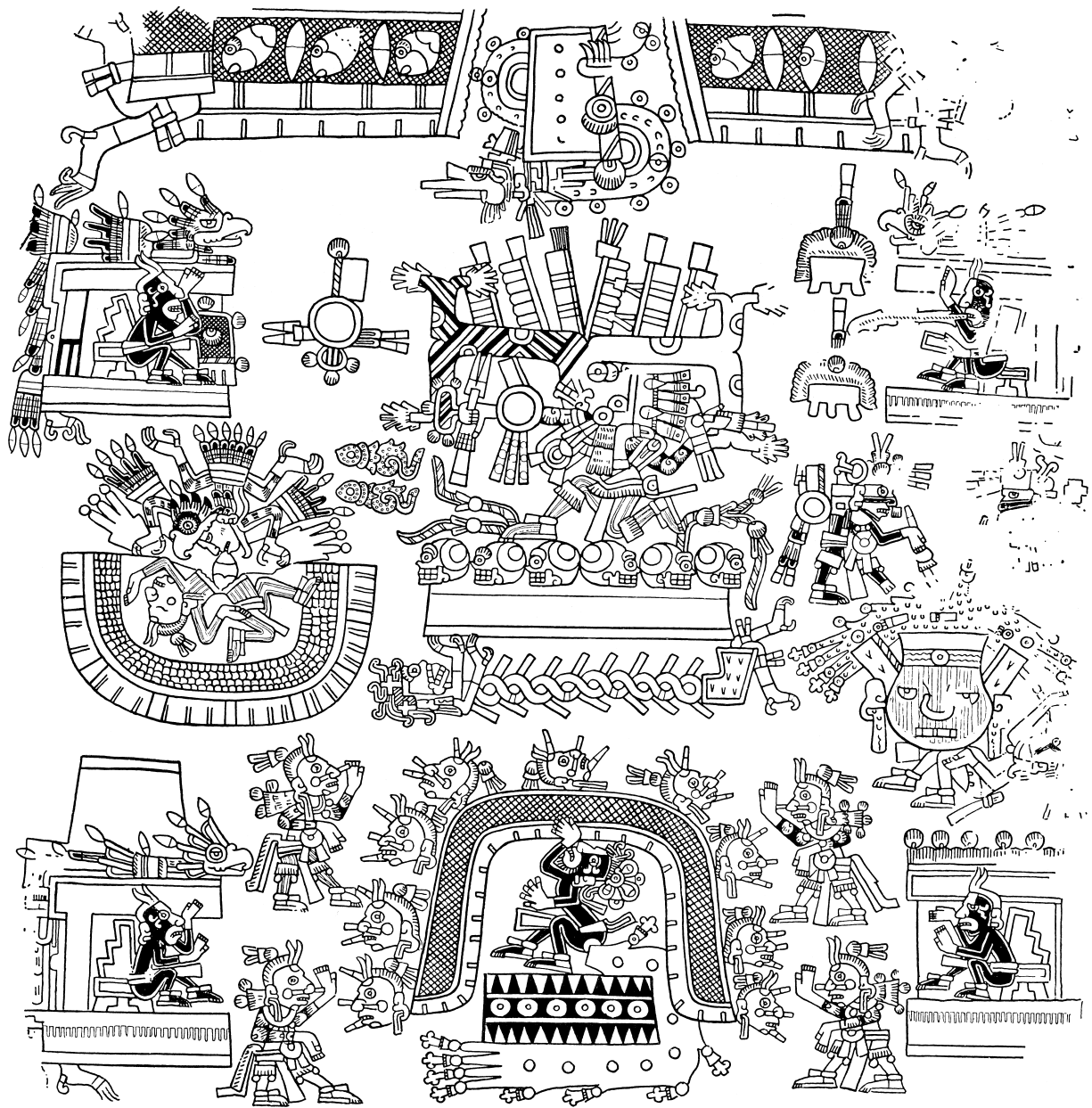


Fig. 118. Episode 7: Venus as the Morning Star, warriors, and dawn. Borgia 45 (from Nowotny 1961:pl. 25; reproduced with permission of Gebr. Mann Verlag).

left (oddly, the arm was omitted in the Seler/Nowotny drawing reproduced as Fig. 118). Growing out of Tlahuizcalpantecuhtli, or behind him, is a bicolored tree, half black and striated like obsidian (left) and half brown like wood (right), which bears six differently colored banners in its branches.

The meaning of the tree and banners is not fully clear. The tree of obsidian and wood recalls a creation story recorded in the *Historia de los Mexicanos por sus pinturas* (Garibay 1979:32) that tells how, after the sky fell during the destruction of the fourth age, Tezcatlipoca and Quetzalcoatl respectively became two great

trees: a *tezcacuahuitl* ("tree of [obsidian] mirrors"), and a *quetzalhuexotl* (*Salix lasiolepis*).⁶¹ These trees helped to raise the sky once more. The obsidian and wood tree behind Venus in the Borgia may be such a sky-bearing tree, which resonates with the position of Venus as it rises between earth and the heavens. Elsewhere in the Borgia (19), Tlahuizcalpantecuhtli appears in the same pose on a *tzompantli* (skull rack), accompanied by the same black and brown tree with banners in its branches, except that there the banners are all the white banners of sacrifice.

The variously colored banners in the tree on Borgia page 45 may also relate generally to sacrifice or perhaps more specifically to war. The banners recall the war banners painted with shields and spears in the Mural of the Chimaltes in Tehuacan Viejo, Puebla (Fig. 124; discussed in Chapter 8). In any case, it is an iconographic message that is shared with the sun god; for on Borgia page 71, Tonatiuh the sun god has almost the same array of differently colored banners behind him when he appears in the day-number almanac, although the tree is missing (Fig. 55). There Tonatiuh is armed, like Tlahuizcalpantecuhtli, with a shield, spearthrower, and darts. On both pages 19 and 71, the fire-water metaphor for war is also present. When multicolored or striped banners appear elsewhere in the Borgia and in Aztec codices, they are usually in contexts involving sacrifice or death.⁶²

On either side of Tlahuizcalpantecuhtli are scenes that constitute offerings. On the right is a great vessel of precious, frothy pulque—the divine, white pulque—accompanied by the red and black Tezcatlipocas, warrior gods. This is probably also an allusion to the close association of pulque and warriors—for warriors drank pulque in order to mock death, according to Sahagún (1953–1982, bk. 4:17; see also Taube 1993). On the left, the offering is a heart sacrifice: Quetzalcoatl disguised as a flinted eagle (probably a metaphorical eagle warrior) descends on a river, where he tears the heart out of a victim whose face paint relates to Venus.

At the bottom of the page, four males, directionally colored and also with the face paint of Venus, frame a scene involving Quetzalcoatl as Venus. Quetzalcoatl sits or crouches on a platform. He has a great Venus star in his hair and is covered by a starry net, punctuated by nine heads of star figures, who are also direc-

tionally colored. Beneath the net, he defecates a great quantity of precious blood. Anders, Jansen, and Reyes García (1993:238) see this simply as blood draining out of Venus before he becomes the bloodless, skull-faced figure above; but Seler (1963, 2:59) read the bloody diarrhea more metaphorically, and I think more accurately, as the reddening dawn light that follows Venus in the morning before the sun rises.⁶³

Although this composition of many scenes does not clearly show the birth of Venus or the stars, it does seem to explain the qualities and relationships of Venus. It links Venus to warriors and, indirectly, to the lords who orchestrate the wars, by putting Tlahuizcalpantecuhtli in association with the Eagle Houses, the precious white pulque, and a heart sacrifice by an eagle. When Venus first appears, he menaces and attacks; but when he is covered by the starry net, he releases the red sky of dawn.

Episode 8: The New Fire

The long ritual passage in the Borgia closes with the drilling of fire, an act that, for the Aztecs and Mixtecs, established a new cycle of time or a new socio-political organization (Fig. 119). At the end of a 52-year cycle, after all the fires had been extinguished throughout the land, an Aztec priest would drill a new fire on the chest of a high-born captive to initiate a new cycle of fifty-two years (Sahagún 1953–1982: bk. 7:25–32). That flame was then carried to the major temples, and from there to the lesser temples and eventually to all the houses, bringing fire and light once more to the land. This marked the time when the people renewed their clothing and household goods, for a new cycle was born. The drilling of a new fire was also a crucial component of rituals that established new polities. In the Mixtec histories, the scribes record how supernaturals and culture heroes carried the drilling sticks and fire board along with the sacred bundle and staffs of authority to new places and how they drilled the new fire and thereby founded new community kingdoms.⁶⁴ The culture hero Lord 9 Wind (Quetzalcoatl) was, of course, the first to drill a new fire and thereby bring political authority to the Mixteca (Vienna 32).

The Borgia fire drilling opens when Quetzalcoatl descends through the cut in the strip goddess at the

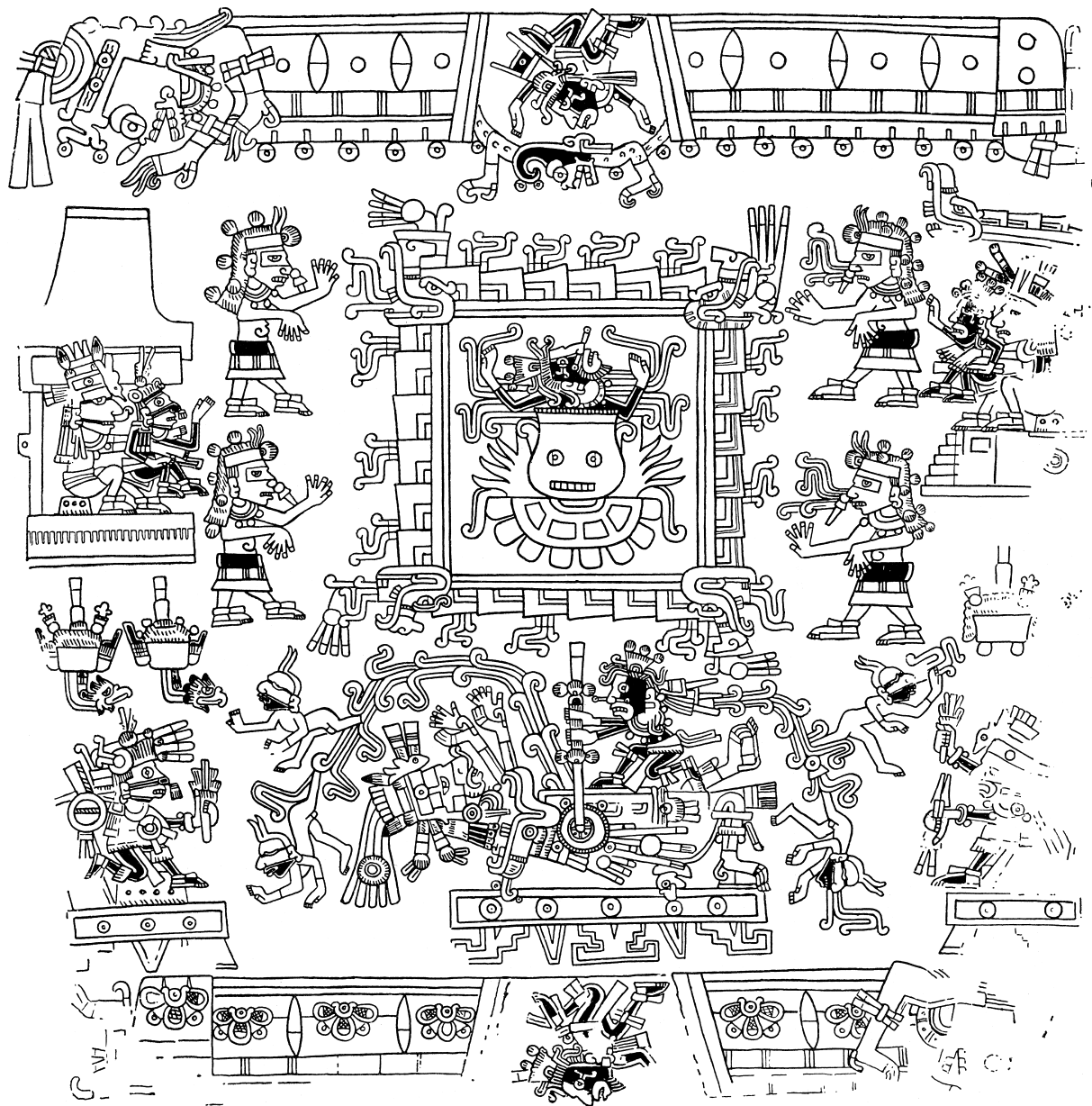


Fig. 119. Episode 8: the last episode, where Quetzalcoatl drills a new fire on the Xiuhtecuhtli/Xiuhcoatl (*center*); Tezcatlipoca and Quetzalcoatl preside over this last event in the narrative (*lower left, right*). Borgia 46 (from Nowotny 1961:pl. 26; reproduced with permission of Gebr. Mann Verlag).

top of the page to enact the action below. In the center is the cosmic hearth, a square red precinct bordered by four smoldering fire serpents (each directionally colored). Within this hearth, Quetzalcoatl simmers in, or emerges from, a large olla set on flames on a turquoise disk. Four females dedicated to Chantico, goddess of the hearth, flank the fire. Byland

(1993:xxvi) suggests that Quetzalcoatl is being symbolically cooked to prepare him for the fire drilling that follows, whereas Anders, Jansen, and Reyes García (1993:241) read the cooking as his transformation into smoke and light; long curls of smoke issue from around Quetzalcoatl.

Just below, Quetzalcoatl drills a new fire from a disk

on the torso of the fire god Xiuhtecuhtli, here enveloped in the body of the fire serpent Xiuhcoatl. Smoke pours forth, and four directionally colored fire essences emerge toward the four directions. This fire drilling, so prominently depicted and located at the end of the narrative, signals the beginning of a cycle of time and perhaps also the beginning of a community and realm. Normally a sign of beginning, the fire drilling functions in the Borgia to close out the creation narrative. It is the last supernatural act of the story, but it is an act that establishes a time and place that will now belong to humans.

The creator gods also take their leave on this page. Framing the cosmic hearth and first fire, on the sides of the page, are two temples (top) and two thrones (below). In the temples, two fire gods hold out and present small images of Quetzalcoatl (right) and Tezcatlipoca (left). These gods then occupy the two thrones below,⁶⁵ where they rule over the final act of the narrative: the fire drilling. This reappearance of Quetzalcoatl and Tezcatlipoca together recalls their birth together on page 31, when they emerged in the darkness of the flinted enclosure (Fig. 106). Thereafter, the pair participated in the series of creation episodes that followed, often acting together as companions but sometimes with Quetzalcoatl acting alone. In the several Aztec creation stories that are preserved in the *Histoire du Mexique* and the *Historia de los Mexicanos por sus pinturas* (Garibay 1979:32, 105–106, 108–109), Quetzalcoatl and Tezcatlipoca are the two gods most often mentioned and the ones who have the most active roles: together they separated the heavens from the earth, they tore apart the earth goddess, and they were instrumental in the sun's creation. Here on this last scene in the Borgia narrative, the two make their appearance again together, presented by the fire gods at the fire drilling. They then face each other, enthroned at the end of the page, as if to survey their accomplishment.

The Borgia narrative ends with the final strip goddess at the bottom of the page, through whom Quetzalcoatl flies to exit the story. It is a Mesoamerican equivalent of the western cowboy hero who rides off into the sunset.

The narrative section ends as abruptly as it begins. No scene follows page 46 into which Quetzalcoatl can enter. To the contrary, the orientation and format of the codex revert to those of the almanacs. The two

almanacs that follow—which associate half the *trecenas* (ten out of twenty) with the Macuiltonaleque and Cihuateteo—seem unrelated to the narrative passage, except that the Tonaleque and Cihuateteo were created in Episodes 3 and 4 (pp. 40, 42). The two cells that initiate these almanacs and border the end of the narrative section provide a transition of sorts, for they picture the emergence or birth of the Tonaleque (surrounded by emerging serpents) and Cihuateteo (surrounded by serpents and centipedes). These almanacs do not otherwise connect much with the cosmogony that just ended, however; instead, they pair with the two almanacs on page 22, which associate the other half of the *trecenas* with two symbolic deer.

Like so many creation stories that were written down in alphabetic script in the sixteenth century, this narrative in the Borgia proceeds in semiautonomous units. Its story is told in a series of individual episodes that can stand alone but are linked together as a loose sequence of events. In the Borgia, each episode has its own individual structure and format, and some are longer and more complex than the others. Each episode is bounded by a strip goddess, however, which reaffirms its distinctiveness and effectively cuts off one episode from the next. Were it not for the strip goddesses that precede and follow the long six-page Episode 2, for example, we might be compelled to divide that unit into smaller sections. Continuity is provided by the figures who exit the quadrilateral gods and goddess in Episode 1 and who fly through the subsequent strip goddesses to exit one episode or enter a new one. The figures consistently move from the top/beginning of the narrative toward the bottom/ending. Although these figures are not all identical, most bear the face paint or costume elements of Quetzalcoatl, and they seem to function as initiators or enablers of the action that follows. They tie the episodes together into a collective whole, which ultimately yields the creation and organization of the world.

Within the narrative, structural similarities parallel similarities in content. The four pages of the beginnings (Episode 1, pp. 29–32), which are marked by quadrilateral framing gods and goddesses, parallel the four pages of the final four episodes (Episodes 5–8, pp. 43–46), which are also characterized by centralized rectangular compositions, each one to a page. In

contrast, the episodes in between span two or more pages. Episode 2 has no clear counterpart; but Episode 3 (sacrifice of the sun and the stillbirth) shares the same general format with Episode 4 (sacrifice of a human), and Episode 5 (pertaining to maize) is paralleled by Episode 6 (birth of flowering plants). This sense of parallelism and structural repetition is a feature that the pictorial narrative shares with Aztec texts recorded alphabetically, where phrases are often coupled and ideas are often repeated in slightly different ways.

In the Borgia narrative, the episodes progress in a generally logical order. Episode 1 (29–32; Figs. 104–106, Plates 11, 12) opens with an explosion of power and introduces materials necessary for what will follow. It initiates the quadripartite organization of the universe, the passage and count of time, death by warfare, and the creator gods Tezcatlipoca (in his five essences) and Quetzalcoatl.

Episode 2 (33–38; Figs. 108–109, 111–112) then illustrates the two celestial temples—the Black Temple (wind, darkness) and the Red Temple (sun, flowers)—and the actions that lead to the birth of the sun, the coming of the rains, and the creation of humankind. The actions of Venus in the Black Temple (33) precede and introduce the first appearance of the sun in the Red Temple (34), just as Venus precedes the sun in the eastern sky. Then follows the bundle opening. Tezcatlipoca and Quetzalcoatl obtain a sacred bundle (smoking with contained power) from the night god, carry it off, and open it to release its spectacular energy, embellished or characterized by symbols of preciousness, fertility, and death. A great current of this energy carries Stripe Eye, another manifestation of Quetzalcoatl, out of the darkness and into a sacred space dominated by the Red and Black Temples (37–38). There Xolotl brings down lightning, clouds are formed, and Tlaloc nurtures the wetlands; there, too, humankind is born (Fig. 113). With this the obverse of the codex ends.

Following the creation of humankind, the next two episodes (which open the reverse) speak of the living sacrifice of the sun and the mortal sacrifice of women and men. Episode 3 (39–40; Fig. 114) records the heart sacrifice of a still-living night sun in the bowels of the

earth and a stillbirth in the dark ballcourt. Episode 4 (41–42; Fig. 115) follows, with the Cihuateteo (the female companions of the sun) and the first bloodletting in the narrative, which prepare the way for the first human sacrifice. This sacrifice is outlined in stages from the victim's preparation to the deposition of his body and its revivification as the Macuiltonaleque, the male companions of the sun. Together the Cihuateteo and the Macuiltonaleque will accompany and stabilize the sun.

Episodes 5 and 6 parallel each other visually and iconographically, treating sustenance and plant fertility. Episode 5 (43; Fig. 116) explains how maize feeds gods and warriors and how it was ultimately carried away from the Mountain/Precinct of Sustenance for use by humankind. Then Episode 6 (44; Fig. 117) explains how human blood and hearts are necessary to nurture all the precious flora. It shows how blood brought by a bat nourishes Xochiquetzal, from whom sprouts the flowering tree of Tamoanchan.

Episode 7 (45; Fig. 118) explains the close association between Venus the Morning Star and warriors and warfare in the morning light before dawn. The narrative then concludes with Episode 8 (46; Fig. 119), when Quetzalcoatl and Tezcatlipoca reappear and reign together around the cosmic hearth, perhaps to survey their accomplishments. Finally, Quetzalcoatl drills a new fire. This last act culminates the narrative, as a supreme act of closure, but it also opens another (here untold) story by initiating a new era. Just as new fires were drilled in the Aztec realm to open a new cycle of time and bring life to new building constructions, and in the Mixtec realm to bring political authority and cultic sanctity to a new polity, this drilling is the last act that establishes the world in which humans will live. This is also the world in which humans will seek divine guidance for their actions and will consult the very almanacs that embrace the narrative.

The Borgia narrative, like most of the creation stories recorded in prose or poetry, does not detail every feature. It simply provides plot outlines, identifies actors, and charts spatial relations, on which the interpreter can then elaborate.



Provenience

The geographic and ethnic origins of the surviving divinatory codices, especially those of the Borgia Group, have occasioned much debate. There is little solid evidence about the acquisition and early history of the codices to help determine their provenience. Despite attempts by over a dozen scholars in the last 100 years, only a few of the manuscripts can securely be assigned to specific locations. We can, however, reach a general sense of their origins by considering the styles in which they are painted, the individual deities and objects that appear in the manuscripts, the pictorial conventions the painters used, and the possible appearance of verbal metaphors (Fig. 120).

The existing divinatory codices divide themselves fairly neatly into two traditions: those of the Aztec or Nahuatl realm and those of the Borgia Group. What distinguishes these traditions is not so much their mantic content and iconography—which is largely shared—but their physical appearance, painting style, and graphic preferences.

The “Aztec” codices are immediately recognizable because their day signs are conceptualized and painted in the same manner as are day signs carved on monumental Aztec sculpture in the valley of Mexico (for example, on the Calendar Stone), and they almost always include the day’s numerical coefficient as well as its

sign. Most of these books also present very similar versions of the *tonalamatl* divided into the twenty *trecenas*. The less acculturated codices, those painted fully in the indigenous style, are made of native bark paper.

In contrast, all the Borgia Group codices are made of hide. They use day signs that are much more similar to those in the Mixtec codices, and they usually give these day signs without their coefficients. Most of the Borgia Group books contain many different almanacs involving both the 20-day cycle and the larger 260-day cycle. They also make use of spacers to stand in for days whose signs are not pictured.

Manuscripts in the Aztec Tradition

The Aztec codices are the Codex Borbonicus, Tonalamatl Aubin, Codex Telleriano-Remensis (as well as its copy, the Codex Vaticanus A/Ríos), and Codex Tudela. The Borbonicus and Tonalamatl Aubin are both painted almost entirely in the preconquest style, although Robertson (1959:86–93) and others have argued for their early colonial dates.¹ The Telleriano-Remensis, Vaticanus A/Ríos, and Tudela contain colonial copies of earlier *tonalamatls*.



Fig. 120. Map of central Mexico, showing the general region where the divinatory codices originated. Drawing by Heather Hurst.

Codex Borbonicus The Borbonicus (Fig. 46, Plate 1) was usually assumed to have been painted in Tenochtitlan-Tlatelolco (Robertson 1959:87; Krickeberg 1961:193; Caso 1962:104, 1967:43–45; Glass 1975a:97) because its style and iconography are so similar to representations from the Aztec Mexica capital and because its depictions of the *veinteina* feasts generally agree with the pictorial and textual accounts for Tenochtitlan and its immediate environs; also, Moctezuma is mentioned in a gloss in the third section (p. 23). Nicholson (1988), however, has made a compelling argument for an origin in the southern lake region (Ixtapalapan or Culhuacan), based on the content of the *veinteina* section,

which emphasizes the goddess Cihuacoatl (patron of Culhuacan), the feast of Ochpaniztli over Panquetzaliztli, and the New Fire ceremony. He notes that the *veinteina* section thus focuses on the gods and feasts relevant to the southern lake region rather than on Huitzilopochtli and his feasts, which would be expected to dominate in Tenochtitlan.

Tonalamatl Aubin The Tonalamatl Aubin can be placed fairly securely in the eastern, Otomi-speaking region of Tlaxcala (Fig. 47). As Nicholson (1963:42–44, 1967:81–82) has noted, the López inventory (1745) of the Boturini collection, which included the Tonal-

matl Aubin, assigns it to Tlaxcala;² and the manuscript is very similar in style to the Codex Huamantla, which is documented as being from Huamantla. Recognizing that the Tonalamatl Aubin and Codex Huamantla are both crudely drawn and painted and are dissimilar to other Tlaxcalan pictorials (e.g., Lienzo de Tlaxcala), Nicholson (1967:81–82) has speculated that they may represent a tradition centered in the eastern Otomi-speaking zone, “which was somewhat divergent from the rest of the province.” If so, this region should include Nahuatl-speaking Tepeticpac (near the city of Tlaxcala) as well, for Lienzo 1 of Tepeticpac (Aguilera 1986) is painted in a generally similar style. The stylistic differences between these codices and the more accomplished Lienzo de Tlaxcala may not reflect specific regional differences as much as they reflect differing levels of artistic skill and the degree of European acculturation.

Codex Telleriano-Remensis and Codex Vaticanus A/Ríos

The Telleriano-Remensis is an early colonial cultural encyclopedia that contains copies of valley of Mexico pictorials and other religious and cultural data from there (Fig. 48). Certainly its *tonalamatl* is iconographically close to the Borbonicus and to images on Mexica sculpture; the cosmogonic section agrees with other Mexica cosmogonies, and the historical annals focus on events of importance to Tlatelolco (Quiñones Keber 1995:127–128). Quiñones Keber (1995:130–132) has argued that the manuscript was first painted in Mexico City in the early 1550s under the sponsorship of Fray Pedro de los Ríos, who then took it to Puebla, where he and others continued to annotate and amend it.

It was probably in Puebla that Ríos had the Telleriano-Remensis copied, “corrected,” and provided with an Italian text. The result, the Vaticanus A/Ríos, was created as a presentation copy for an Italian beneficiary.³

Codex Tudela A cultural encyclopedia like the Telleriano-Remensis, the Tudela also focuses on gods, ceremonies, and events in the valley of Mexico (Figs. 54, 60, Plate 3). Andrés de Olmos is usually proposed as its creator or sponsor (Wilkerson 1974; Baudot 1995:174, 208–217). Its painters worked in an early colonial Aztec style, and its 260-day almanac is similar to other Aztec almanacs in that it organizes the count into the twenty

trecenas, includes the Lords of the Night for each day, and also includes the Volatiles, at least for the first *trecena*. It shares similarities with some Borgia Group almanacs, however, for its twenty *trecenas* are not presented separately but are grouped into four sets of five *trecenas* (65 days). Such 65-day periods were called *cocijos* in Zapotec and were apparently characteristic of some Zapotec almanacs (Córdova 1987:202). The twenty-day count in the Tudela locates the day signs around a splayed deerskin, in the manner seen also in the Borgia (53) and Vaticanus B (96) and described by Córdova (1987:203) in his Zapotec grammar. Such similarities to Borgia Group and Zapotec almanacs do not necessarily mean that the Tudela artist was copying almanacs from elsewhere; rather they suggest that such almanacs were widespread in central and southern Mexico, even if the other existing Aztec pictorials do not include them.

Codices of the Borgia Group

The provenience of the Borgia Group continues to inspire speculation and controversy. It has almost become a matter of regional pride where these extraordinarily beautiful manuscripts originate. Aztec specialists argue for Nahuatl-speaking locations for several of the manuscripts, whereas Mixtec specialists favor the Mixteca. Only two of the manuscripts—Aubin No. 20 and the Codex Porfirio Díaz Reverse, the “minor” members of the Borgia Group—have relatively secure proveniences (the Mixteca Alta and Cuicatec *cañada*, respectively). The other five—those that most scholars refer to as the “core members”—have not been satisfactorily placed geographically. It is useful to review the better-known proveniences first.

Aubin No. 20 The large hide panel of Aubin No. 20 organizes the *tonalpohualli* around the four cardinal directions and center; as Walter Lehmann (1905, 1966) first observed, it employs the canonical Mixtec cardinal directions: Sun (east); Checkerboard Hill, Split Hill (north); River of Ashes (west), and Skull Place (south) (Figs. 67, 68). These directions are also used in the Mixtec Codex Vienna, in the Coixtlahuaca valley *lienzos* of Tequixtepec and Tlapiltepec and Selden Roll, and in the Cuicatec Codex Porfirio Díaz Reverse (Fig. 69);

the places have been identified geographically with the towns of Apoala, Tepexi el Viejo, San Mateo Nejapan, and Chalcatongo in and around the Mixteca (Jansen 1982a, 1982b, 1: 224–232; Anders and Jansen 1988: 146–147, 1994: 293–296; Simonin 1989). Aubin No. 20 additionally uses Mixtec conventions, such as a spear thrust into a burning temple to symbolize conquest, temples on foundations decorated with step frets, and chevron paths that designate the road to the enemy; and its style is nearly identical to the Mixtec codices Vienna and Zouche-Nuttall (Nicholson 1963: 89; Lehmann 1966: 174). Because of these features, Aubin No. 20 is usually assigned to the Mixteca Alta (Caso 1966a: 179; Nicholson 1963: 90; Simonin 1989: 131).

Codex Porfirio Díaz Reverse Equally securely and even more precisely assigned, the Codex Porfirio Díaz has been traced back historically to the town of San Francisco Tututepetongo in the Cuicatec region of northwestern Oaxaca. Although Eva Hunt (1978) had earlier proposed that the Porfirio Díaz was painted in the municipality of Cuicatlan, Jansen (Anders and Jansen 1994: 267–270; Anders, Jansen, and van der Loo 1994: 46) and Sebastián van Doesburg (1998: 104, 2001: 104–118) have correctly linked it to the Códice de Tututepetongo, mentioned in an unpublished study by the nineteenth-century Oaxacan historian Manuel Martínez Gracida. The divinatory pages on the reverse of the Porfirio Díaz use the Mixtec conventions for the cardinal directions and feature Mixtec supernaturals such as the prototypal priest Lord 2 Dog, the ancient Lady 1 Eagle, and Lady 9 Grass (Fig. 69); the painter followed other decidedly Mixtec conventions as well.⁴

Zones under Consideration

A dozen or more scholars have contributed insights and opinions about the provenience of the other Borgia Group codices. Almost all would agree to a region that encompasses Puebla, Tlaxcala, the Mixteca, and parts of southern Veracruz; but different individuals favor one area over the others for one or more of the manuscripts. Nicholson (1963, 1966), Sisson (1983), and the team of Anders, Jansen, and van der Loo (1994: 45–117) have studied and reported on the problem the most thoroughly. The discussion here draws heavily on their reviews and analyses. Four areas have been proposed

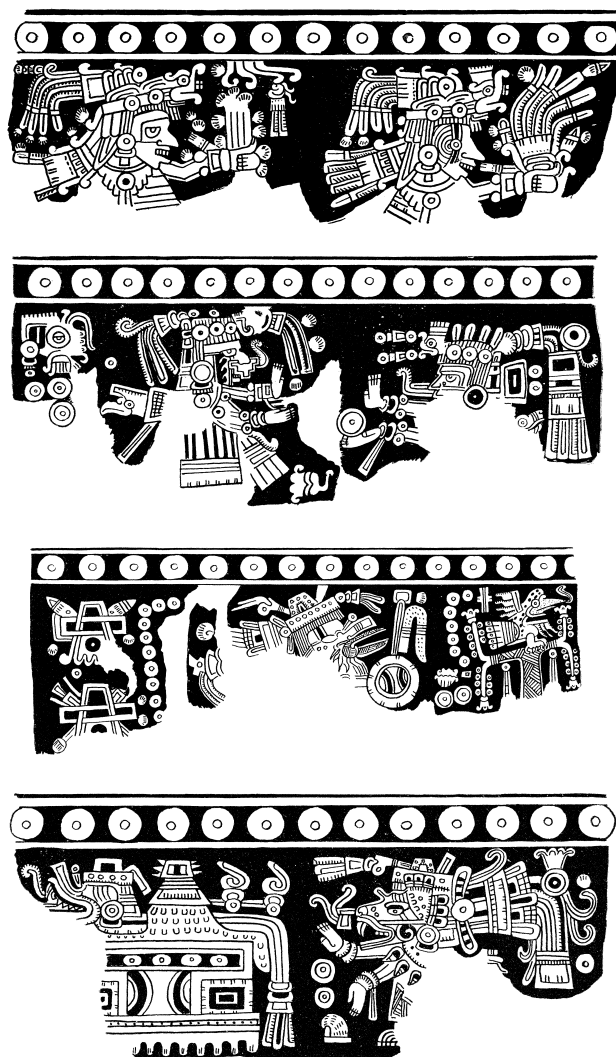


Fig. 121. Scenes from the wall paintings at Mitla (from Seler 1902–1923, 3: opposite 470, pls. 13, 15).

as the source or sources: the Tehuacan–Cozcatlan–Teotitlan del Camino area of southern Puebla along the northern Oaxaca border; the Mixteca; the Puebla–Tlaxcala region of Cholula and Tlaxcala; and the southern Gulf Coast.

Tehuacan–Cozcatlan–Teotitlan del Camino Eduard Seler was the first proponent of the Tehuacan–Cozcatlan–Teotitlan del Camino region. He saw stylistic similarities between the Borgia Group manuscripts and the murals at Mitla (the only Postclassic murals then known) (Fig. 121); but because he did not see Zapotec deities in the codices, he suggested that they originated

in a region near, but not fully in, the Zapotec area, such as Teotitlan, Tochtepec, or Coatzacoalco (Seler 1902–1923, 1:341, 1904b:324, 1990–1998, 1:74). Due to resemblances between the face painting of polychrome effigy *xantiles* from Teotitlan del Camino and images of Xochipilli/Macuilxochitl in the Borgia (Fig. 122), he narrowed the region to the Nahuatl-speaking cities of Tehuacan, Cozcatlan, and Teotitlan del Camino (Seler 1901–1902:210, 1902–1903:161, 329, 1902–1923, 2:927, 1904b:pl. 42, 1963, 1:103, 1990–1998, 3:208). With the excavation of more *xantiles*, Sisson (1983:653) has noted that their similarity to the Borgia becomes even more apparent; and their range has expanded to include the Gulf coastal lowlands (e.g., Cempoala), although their center of distribution remains the Tehuacan valley.

Seler (1902–1903:329) also felt the Borgia Group codices were painted by speakers of Nahuatl because

of the appearance of the *atl-tlachinolli* (water-conflagration) metaphor for war in the manuscripts (e.g., Borgia 71; Fig. 55), which he felt was limited to Nahuatl. Subsequently, however, Pedro Carrasco (1950:131) has noted that “water and fire of god” is an Otomi word for war. Nicholson (1963:38, 1966:150) and Jansen (1978:114; Anders, Jansen, and van der Loo 1994:48) have both pointed out that the same verbal metaphor for war (water-fire/burning) appears also in the Mixtec language (*nduta ndecu*), even if it does not appear as a visual metaphor in Mixtec codices (Nicholson 1963:38–39). Thus, the water-conflagration symbol does not, unfortunately, indicate what language the painters spoke.

A half-century after Seler’s proposal, Robert Chadwick and Richard MacNeish (1967) revived his southern Puebla hypothesis following excavations in the

Fig. 122. Polychrome effigy *xantil* of Xochipilli/Macuilxochitl from Teotitlan del Camino. Seler Collection, Museum für Völkerkunde, Berlin (from Seler 1904b:pl. 42 [opposite 548]).



Tehuacan valley, which revealed pottery types and artifacts from the Venta Salada phase that were similar to those pictured in the Codex Borgia. Specifically Chadwick and MacNeish (1967:126) argued along four lines. (1) The Borgia has two distinct glyphs—the day sign Flint and the unusual version of the AO year signs (lacking the O)—that occur on Venta Salada artifacts. (2) The Borgia depicts pottery types diagnostic of Venta Salada in the Tehuacan valley (and not then known to occur elsewhere). (3) The Borgia shows houses with unusual gabled roofs (eared roofs) like those of the Chocho-Popoloca peoples west of the Tehuacan valley (Cook de Leonard 1952–1953:fig. 58) (Fig. 123). (4) The cult of Venus, which Seler believed dominated much Borgia imagery, had been strong in the Tehuacan valley.

Some of these arguments have not stood the test of later scholarship. The Venus argument, first proposed by Seler (1898), has not been sustained, especially since much of Seler's reading of Venus imagery in the Borgia has been discounted (Nowotny 1961; Byland 1993; Anders, Jansen, and Reyes García 1993). The ceramic evidence is also less tight geographically, since Shirley Gorenstein (1973:64) has shown that many of the ceramic types and styles extended over most of southern Puebla.⁵

The evidence of the eared roofs remains a strong indicator for the general but broadened area. Nicholson (1963:41, 1966:150) and Jansen (1978:112) have pointed out that eared roofs are depicted in the Codex Egerton (Sánchez Solís), from the Mixteca Baja. Sisson (1983:654) found that such eared roofs are also typical of Mazatec (sierra east of the Tehuacan valley) and Chocho (northern Oaxaca and just south of the Popoloca in Puebla). He noted that the Popoloca, Mazatec, and Chocho languages all belong to the Chochan linguistic group, which was distributed from Tepexi el Viejo and Tecamachalco in the north to Huautla de Jiménez and Coixtlahuaca in the south. The range of these distinctive eared roofs may well have been even broader in the late Postclassic than it was in the twentieth century.

The hypothesis of a Tehuacan valley provenience for the Borgia gained additional support in 1991 when a mural depicting eight war shields was excavated at Tehuacan Viejo (Sisson and Lilly 1994a, 1994b) (Fig. 124). Stylistically and iconographically, their images are very similar to those in the Borgia and less similar to other

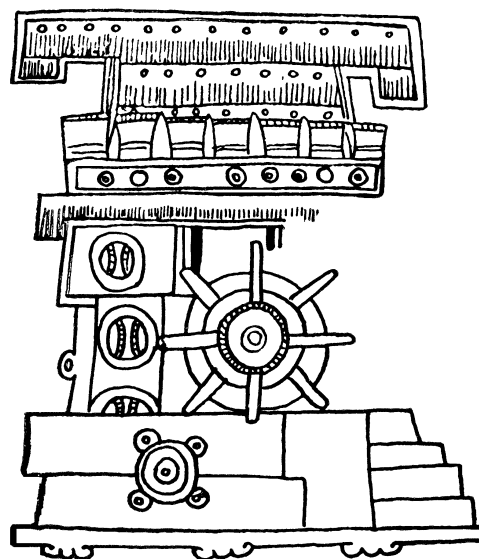
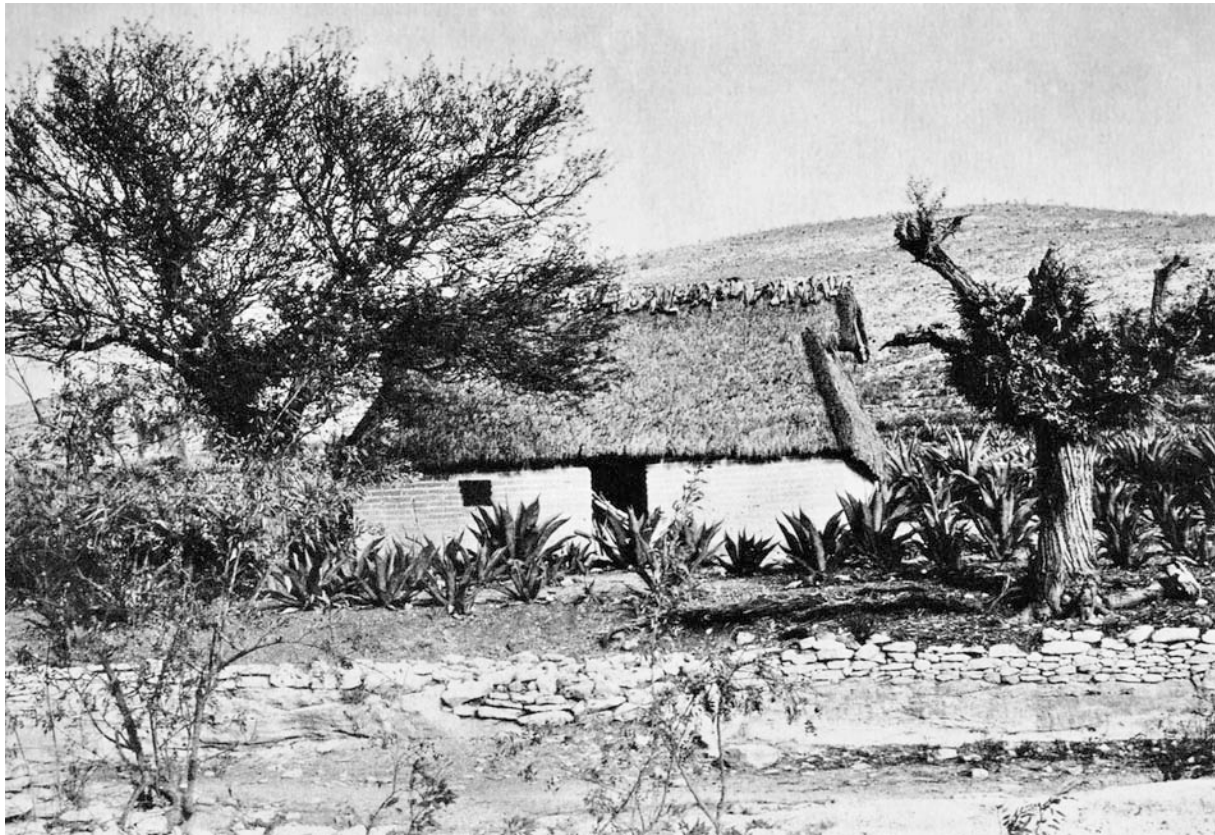


Fig. 123. a, Temple with an “eared” roof in the Codex Borgia (51); b, House with an “eared” roof in Acatepec, Puebla (a, from Seler 1904b:310; b, from Chadwick and MacNeish 1967:fig. 82. © Robert S. Peabody Museum of Archaeology, Phillips Academy, Andover, Massachusetts. All rights reserved).

Borgia Group manuscripts or Mixtec codices (Sisson and Lilly 1994a, 1994b). The Tehuacan valley thus remains viable as a strong referent for provenience.

The Mixteca The Mixteca was first proposed by Rafael García Granados (1940–1941:43–47), who argued that the Borgia Group was Mixtec-Zapotec rather than Nahuatl because of its general stylistic similarity to the Mitla murals. He also based his opinion on the presence of the AO year sign in the Borgia (although he noted its difference from the AO signs in the Mixtec genealogical histories) and on a comparison of the weapons pictured in Borgia Group, Mixtec, and Aztec codices. By analyzing the way the day signs were rendered in these different codices, García Granados (1942) recognized a distinction between Borgia Group day signs and those of the Aztec pictorials, and he observed that the signs in the Fejérváry-Mayer and Laud resembled those in the Mixtec screenfolds Vienna, Zouche-Nuttall, Bodley, Selden, and Colombino-Becker. Salvador Toscano (1952:370–371) also suggested a Mixtec provenience for the Borgia Group by recognizing general similarities with images on a polychrome vessel from Nochix-



tlan (Fig. 125), although he did not rule out the Cholula area.

Perhaps the chief and most steadfast proponent of a Mixtec affiliation was Donald Robertson (1959:9, 14, 89n, 1963, 1966), whose opinion was based primarily on the general stylistic similarities between the Borgia and the Mitla murals and Mixtec historical codices Zouche-Nuttall and Vienna.⁶ Robertson also cited the appearance of the AO year sign in the Borgia and the fact that all the Borgia Group codices were made of hide, as are the Mixtec screenfolds. Believing that the Mixteca-Puebla horizon style (which he later called the International Style of the Late Postclassic) originated in the Mixteca, Robertson (1963:163) also saw the Mixteca as having an older and more vital artistic tradition than other areas, such as Puebla or Tlaxcala. To him, the Nahuatl manuscript tradition in Puebla and Tlaxcala was not sufficiently important to have produced a manuscript like the Borgia (*ibid.*); moreover, he felt that the Borgia conformed to the nature of Mixtec art, which he described as “small and finely wrought rather than . . . large and monumental” (Robertson 1963:151).

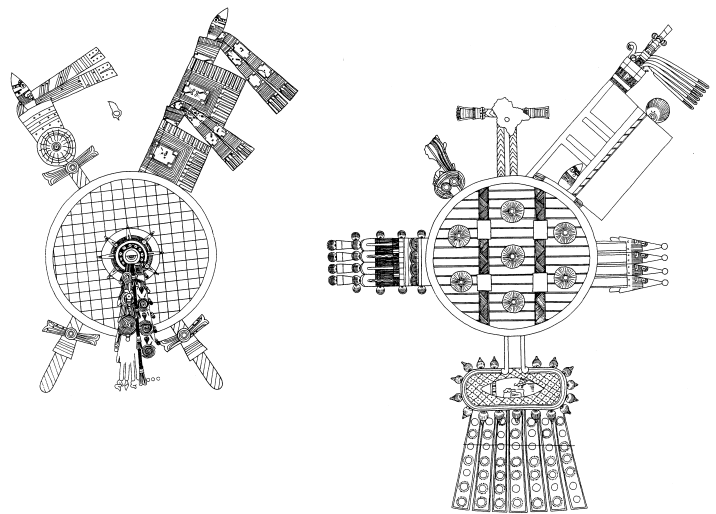


Fig. 124. Shields and weapons from the Mural of the Chimales, Tehuacan Viejo, Puebla (from Sisson and Lilly 1994b:figs. 5, 6; reproduced with permission of Labyrinthos Press).

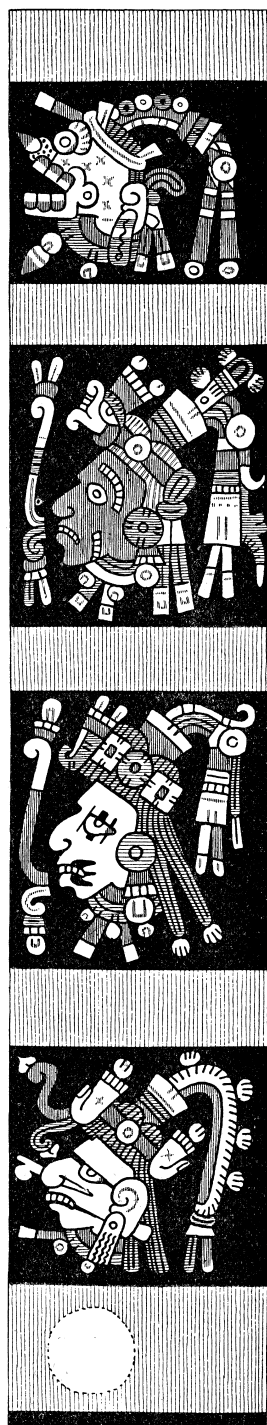


Fig. 125. Heads of four supernaturals on a polychrome vase from Nochixtlan in the Mixteca Alta (from Seler 1902–1923, 3:529).

The only codex in the Borgia Group that he suggested might not be Mixtec, because of the sloppiness of its execution, was the Vaticanus B (Robertson 1966:310).

Ironically, Nowotny (1961:15–16, 2005:8) felt that the Vaticanus B was one of the manuscripts that *could* be assigned to the Mixteca, because he saw it as stylistically related to the Vienna Reverse, which is also hurriedly painted. Nowotny (1961:42, 201, 2005:43, 205) also favored the Mixteca for the Codex Cospi, because he felt that the supernaturals on pages 12 and 13 had similar face paint to the four gods painted on a vessel from Nochixtlan (Fig. 125). Nowotny (1961:202, 2005:207) additionally introduced the evidence of Aubin No. 20, a decidedly Mixtec document (Lehmann 1905, 1966), which he grouped with the Borgia codices.

A number of other connections between the Borgia manuscripts and the imagery in books and ceramics from the Mixteca subsequently have been made by Nicholson (1963:26–41), who nevertheless argued for a Cholula provenience for the Borgia; Jansen (1978); Sisson (1983), summarizing several opinions; Anders, Jansen, and van der Loo (1994:45–117); Bryan Dennis (1994); and María de los Ángeles Ojeda Díaz (1997). These connections concern calendrical conventions, the presence of Mixtec supernaturals and possibly rituals, and Mixtec ceramics.

Most of the day signs in Mixtec and Aztec codices are very similar, except that Aztec painters achieved a degree of cursive naturalism not sought by their Mixtec counterparts. The Mixtec and Aztec painters consistently differed in the way they represented certain signs, however (Fig. 126; see also Fig. 12). In the Mixtec codices, Crocodile is flatter and more linear, Grass features a skeletal jaw rather than a full face, Reed is an arrow without side leaves or a base, and Rain reduces the rain god's face to the salient elements of knotted panel, eye, and fangs. All the Borgia Group manuscripts generally follow these "Mixtec" preferences rather than the "Aztec" ones. The day signs in Laud and Fejérváry-Mayer are nearly identical to those in the Vienna and Zouche-Nuttall; the Borgia and Cospi ones are less close (García Granados 1942; Boone 1982, 1990).

Mixtec artists consistently employ a stylized AO symbol to differentiate a year from a day. As García Granados (1940–1941:43–44) pointed out, the AO is

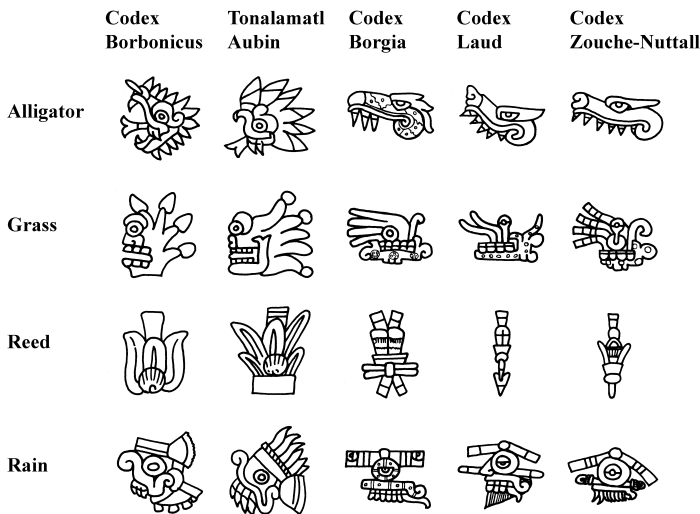


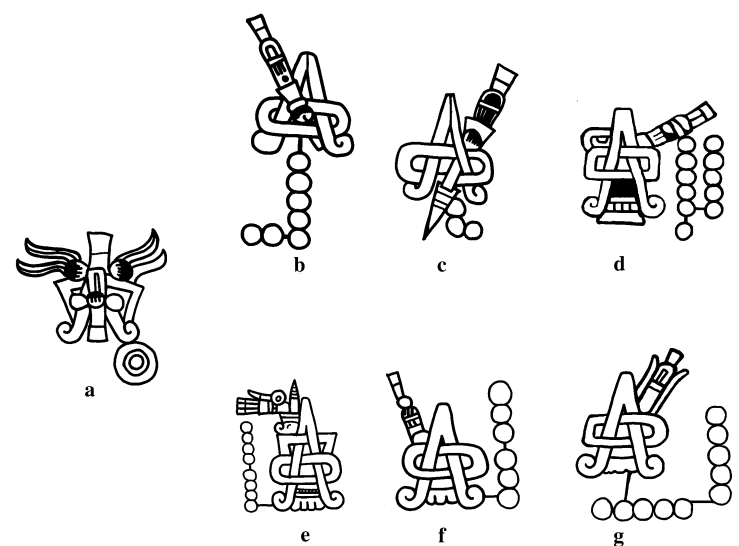
Fig. 126. Day signs in the Aztec, Borgia Group, and Mixtec manuscripts. Drawing by Elizabeth Boone.

embellished in a variety of ways (some have a feather or an eye added at the top) and the day sign can be located in several ways around it; nonetheless the symbol retains its clear identity. Its Late Postclassic and early colonial geographic distribution extends from Tecamachalco in southern Puebla, to the valleys of Tehuacan and Coixtlahuaca, to the Cuicatec Cañada, throughout the Mixteca, and to the valley of Oaxaca (Anders, Jansen, van der Loo 1994:87). The Borgia Codex, but not others of the group, also employs the AO sign on the several occasions when it depicts a year date (pp. 27, 28, 49, 50, 51, 52) (Sisson 1983:655) (Fig. 127). The Borgia sign is not the exact Mixtec AO, however, for its artist replaced the O with a trapezoid, which rather resembles Classic and Epiclassic year signs from Teotihuacan, Texmilincan, and Tenango.⁷ As Nicholson (1963:69) pointed out, the trapezoid device is occasionally included with the symbol in some Mixtec pictorials (e.g., Colombino 11, 18), but the interlaced O element is never absent. Still, some kind of “Mixtec” connection is apparent. Additionally, the dates year 1 Reed and day 1 Crocodile, which figure in an almanac in the Borgia (27) and Vaticanus B (69), join to become a principal creation date in the Mixtec manuscripts.⁸

Most of the deities in the Borgia Group are equivalent in a general sense to both Aztec and Mixtec gods, although, as Pohl (personal communication, 2005) points out, in their Aztec or Mixtec versions they are

part of different narratives. Some, however, only appear elsewhere in the Mixtec screenfolds and may be specifically Mixtec gods. The supernatural on Borgia 25 (and cognate on Vaticanus B 70) whose mouth is covered by a sacrificial knot, a serpent, and flints has been identified with the pair of deities, Lords 4 Serpent and 7 Serpent, who participate in supernatural creative events recorded in the Vienna and Zouche-Nuttall (Fig. 128).⁹ The lords lack calendrical names in the Borgia and Vaticanus B, and their face paint and costumes are different than in the Mixtec codices, but the mouth assembly is sufficiently odd to imply a connection. Nicholson (1963:68) also suggested that two other Mixtec gods identified by complex mouth assemblages—Bird-Bill Mouth (9 Movement) and Jaguar-Serpent Mouth (7 Movement)—could perhaps be equated with males in the Borgia that have a bird’s mouth (23) and a long jaguar snout (43), but he did not insist on this. These associations seem less convincing when the costuming and contexts are so different.¹⁰ Jansen (1978:114) proposed that an old, unnamed priest in the Borgia (38) is the archetypical Mixtec priest Lord 2

Fig. 127. The AO year sign in the Codex Borgia: a, compared to those in the Mixtec codices: b, Vienna; c, Zouche-Nuttall; d, Bodley; e, Colombino (note the added trapezoid); f, Colombino; g, Selden. Sources: a, Borgia 71; b, Vienna 46; c, Zouche-Nuttall 2; d, Bodley 32; ef, Colombino 18, 3; g, Selden 2. Drawings by Heather Hurst and (dg) Danielle Pierce.



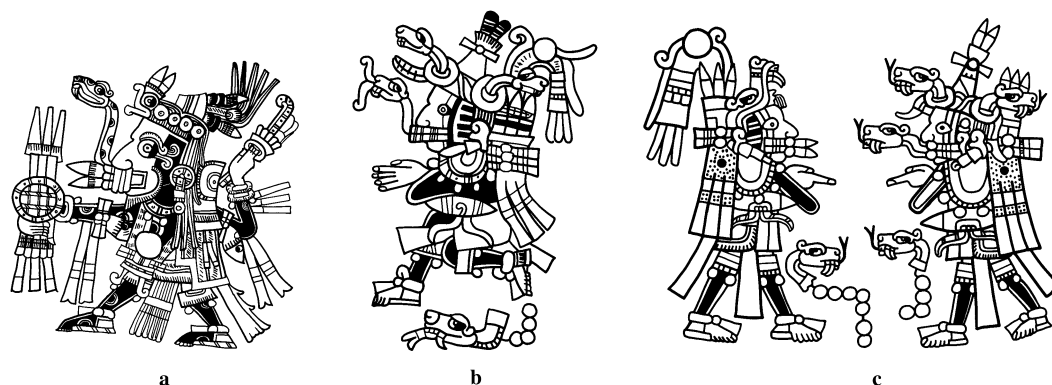


Fig. 128. Probable identical or related gods in the Borgia and Mixtec codices: a, The supernatural in the Borgia (25) whose mouth assemblage is composed of a sacrificial knot, flints, and a serpent; b, Lord 4 Serpent in the Zouche-Nuttall (37), whose mouth is covered by the knot and serpent; c, Lords 4 Serpent and 7 Serpent in the Vienna (5); 7 Serpent's mouth is covered by the knot and flints. Drawings by Heather Hurst.

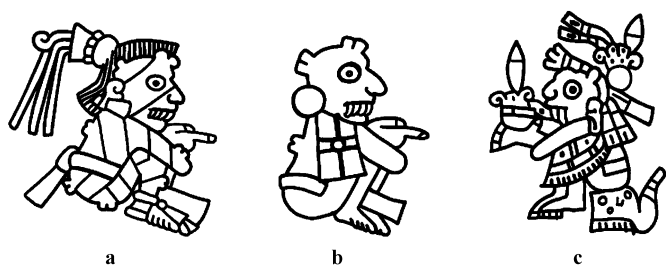


Fig. 129. Mixtec *n̄uhu* figures: ab, Codex Vienna (37, 27); c, Codex Vaticanus B (72). Drawings by Heather Hurst.

Dog, but the only connections between the two are their age and priestly status.¹¹

More telling is the appearance in the Vaticanus B (72) of a Mixtec *n̄uhu* (earth spirit), an anthropomorphic male characterized by “earth” or “stone” bumps on his head, circular eyes, and fangs, who seems particular to the Mixtecs (Fig. 129).¹² Scholars of Mixtec codices have also proposed that the personified plants on Borgia 30 (Fig. 105) can be identified with the *n̄uhu* who represent plants in the Vienna (37), although the similarity is a generalized and not a specific one.¹³

A major argument against a Mixtec provenience for the Borgia manuscripts is the presence, and near ubiquity in the Borgia, of the deity Tezcatlipoca and his scarcity in the Mixtec codices (Nowotny 1961:27, 2005:21; Nicholson 1963:32, 1966:150). A quintessentially Na-

hua deity “who plays a major role in the cosmogony-theogony of the valley of Mexico Nahuatl-speakers (and apparently adjacent Puebla-Tlaxcala as well),” Tezcatlipoca is conspicuously absent in the Vienna cosmogony (Nicholson 1963:33). Tezcatlipoca does appear with his striped face paint, circular shell pectoral, and day name 2 Reed in the Zouche-Nuttall (14), where he stands opposite Lord 4 Jaguar, a supernatural or priest representing Pueblan-Tlaxcalan traditions, who is thought to be from Cholula or Coixtlahuaca (Fig. 130).¹⁴ The two stand together on a place sign (edged by ramparts) that is one in a series of places through which Lord 5 Flower and Lady 3 Flint pass after their descent from a celestial Chicomoxtoc. Because the subsequent place is marked by two snow-capped mountains (Popocatepetl, Itztaccihuatl, Matlalcueye, or Orizaba) and occupied by individuals who may be Chochos, the Zouche-Nuttall painter is likely showing Lord 4 Jaguar and Tezcatlipoca at Cholula, Coixtlahuaca, or some city near the volcanos.¹⁵ This suggests that the Zouche-Nuttall painter recognized Tezcatlipoca as a god with Nahuatl rather than Mixtec affiliations. Tezcatlipoca also appears in the Porfirio Díaz Reverse (35, 42) from the Cuicatec area of northern Oaxaca.

Another telling feature is that the supernaturals in the Borgia Group are rarely accompanied by their day names, whereas in the Mixtec codices they almost always are. Exceptions are the five Cihuateteo and five Macuiltonaleque (gods of the west and south), whose

names are implicitly given by the structure of the almanacs in which they appear (Fig. 70).¹⁶ On the occasions when specific day dates are painted near supernaturals in the Borgia manuscripts, the dates usually do not coincide with the Mixtec names of these gods. For example, the Mixtec name for the solar god is Lord 1 Death (and sometimes Lord 7 Flower in the Vienna); but in the Borgia, the sun god is accompanied by the day 4 Movement (Fig. 55, Plate 4), which refers to the Aztec feast of the sun on that day (Sahagún 1953–1982, bk. 4: 6).¹⁷ An image of Tlazolteotl with arrow-heads on her clothing is accompanied by the date 9 Reed in the Borgia (47); she may equate with the supernatural Lady 9 Reed whose clothing is edged in flints in the Zouche-Nuttall (3, 51) (Anders, Jansen, and van der Loo 1994: 84), although her other attributes are very different. Deity and day date correlations in the Fejérváry-Mayer are mixed: a ritual that involves the solar god (p. 5) takes place on the day 1 Death (Fig. 97), which is suggestive of a Mixtec association; but a ritual on 1 Movement (p. 11) involves Chalchiuhtlicue (goddess of groundwater) rather than Venus or Tlahuizcalpantecuhtli (whose Mixtec name is 1 Movement), and a ritual on 1 Dog (Fig. 98) seems to reflect a ceremony described by Sahagún (1953–1982, bk. 4:87).

Fig. 130. Lord 2 Reed, Tezcatlipoca, standing on a place sign facing Lord 4 Jaguar. Codex Zouche-Nuttall 14 (from Anders, Jansen, and Pérez Jiménez 1992b).



The face paint and insignia of several gods in some of the Borgia codices also fit Aztec rather than purely Mixtec conventions. For example, the solar gods in all the codices occasionally have plain red faces, but in the Mixtec codices they often also have either white segmented bands arcing around their eyes and running up from their chins or a vertical line through their eye; solar beings in the Vaticanus B and Porfirio Díaz Reverse also have segmented arcs around their eyes or up from their chins (Figs. 64, 78). In contrast, the solar gods in the Borgia (Fig. 17a) and Cospi are often marked by an unsegmented red arc around the eyes, such as is seen on the Aztec “Calendar Stone.”¹⁸ Venus is almost always characterized by white circles or squares painted at the edges of his face. When he appears in Aztec (but not Mixtec) manuscripts, however, he wears a distinctive headdress composed of a ruff of dark feathers and a fillet punctuated by pointed flints. Venus wears this same headdress in the Borgia and Cospi (Fig. 91, Plate 9) but not in the Fejérváry-Mayer and Laud.¹⁹

Several scholars have also argued that the narrative section in the Borgia contains rituals that are referenced in briefer form in the Mixtec codices Vienna and Zouche-Nuttall. In particular, they see the “Bundle Episode” in the Borgia (where two supernaturals carry a cult bundle away from a temple and open it to release supernatural power that sweeps Quetzalcoatl into a ceremonial center filled with activity) as paralleling foundation rituals in the Zouche-Nuttall (14–22), where cult bundles are carried and placed in the temples of polities being newly established.²⁰ Equivalent elements in these rituals are temples with feathered serpents curled in or on them, celestial temples, the importance of a bundle carried from a celestial location, and the presence of a circular hearth with a Fire Serpent bursting from it. These correspondences are very abstract, however. Cult bundles are essential elements of most polities and temple precincts and would have been carried and opened on many occasions. Architectural features like circular hearths, celestial temples, and temples with feathered serpents twining around them can occur in many locations and contexts, especially if the feathered serpent is functioning as an adjective for “precious,” “priestly,” or some other quality. Moreover, as I argue in Chapter 7, the Borgia episode

is functionally different from the foundation events being depicted in the Zouche-Nuttall; similarities exist principally in a few particulars but not in the whole.

The Mixteca, however, remains a major point of reference for determining provenience. The stylistic and iconographic similarities for at least some members of the Borgia Group are very strong. As discussed more fully below, the Fejérváry-Mayer, Laud, and Vaticanus B in particular seem to be most like Mixtec codices and artifacts, the Borgia and Cospi slightly less so; their imagery seems to relate better to the northern Puebla-Tlaxcala region.

Puebla-Tlaxcala Region Almost immediately upon the discovery and excavation of the murals at Tizatlan, Tlaxcala, in the 1920s, Alfonso Caso (1927) and Eduardo Noguera (1929) noticed considerable stylistic and iconographic similarities between the murals and images in the Borgia Group. Other scholars have since joined them in proposing this general area as the location in which Borgia codices were painted, but none have been more persuasive than H. B. Nicholson, who has long championed Cholula over the Mixteca for the Borgia Codex itself.²¹ Evidence for a Puebla-Tlaxcala or Cholula provenience for at least some of the members is considerable. It includes similarities with the murals excavated at Tizatlan and, more recently, at Ocotelolco nearby; the importance of the cult of Tezcatlipoca in the area; and the presence in the Borgia of Cholula ceramic types, particular kinds of figurines, and gods and motifs from Cholula polychromes.

The Tizatlan murals are telling. The painting of Tezcatlipoca on the front side of Altar A at Tizatlan (Fig. 131) is so close in its iconography, attitude, and painting style to Tezcatlipoca as painted in the Borgia (17, 21) that Caso (1927:144–145) proposed that the same culture produced them both. The Tezcatlipocas share the same pose, smoking-mirror foot, face paint, and square nose ornament, and they have nearly identical headdresses, back devices, shield-spear-banner clusters, necklaces, and other costume features. Caso (1927:146–147) also noted that the image of Tlahuizcalpantecuh-tli on Altar A was also very similar to some of the manifestations of Venus in the Borgia (19, 45, 53, 54). The images of Chalchiuhtlicue and other gods at Tizatlan are also similar to those in the Borgia.²² Stylisti-

cally, however, the Tizatlan murals are more loosely painted than those in the Borgia, which led Robertson (1963:158–159) to question their relationship. One should expect greater looseness in a wall mural than in a codex, however, so Robertson's objection is not sustained. Nicholson (1994:114) felt the Tizatlan murals affiliate stylistically with the Cospi even more than with the Borgia.

The excavation of additional Tlaxcalan murals at the neighboring site of Ocotelolco in 1990–1991 adds strong support for these associations. The front of the altar features a central scene, framed by flints, of an anthropomorphic flint knife in a vessel; from the flint's open mouth peeks the face of Tezcatlipoca (Fig. 132). The imagery and iconography are nearly identical to the scene in the Borgia of the birth of Quetzalcoatl and the five Tezcatlipocas from an anthropomorphic flint within a flinted enclosure (compare Fig. 106). Descending fire serpents on the sides of the altar have been equated with the serpents in this Borgia scene (32). Additional evidence found during the excavation is a footed plate (*cajete*) that bears the head of Tezcatlipoca (Fig. 133); it is equally close iconographically and stylistically to Borgia images of the god (compare with Fig. 131).²³ These Tezcatlipoca images from Tizatlan and Ocotelolco bear more than a passing or general resemblance to Borgia images; they agree even in many of the smaller details and are thus clearly products of the same aesthetic and iconographic tradition.

The murals also reflect an understanding of the importance of Tezcatlipoca that is shared by the painter of the Codex Borgia. As Nicholson (1963:35) has pointed out, there were three great centers for Tezcatlipoca's cult: in Texcoco; in Tlapitzahuayan (Tlacoachcalco) in Chalco-Tlalmanalco in the southern valley of Mexico; and in Tianquizmanalco near Atlixco, Puebla (just 55 kilometers from Tizatlan and 25 from Cholula).²⁴ According to Torquemada (1975–1983, 3:357) pilgrims came from as far away as beyond Guatemala to visit the Tezcatlipoca shrine near Atlixco. Quetzalcoatl may have reigned supreme as the principal god of Cholula and the focus of pilgrimages to that metropolis, but Tezcatlipoca also figured as a major deity in the Puebla-Tlaxcala area. His prominence in the region agrees with his repeated appearance in the Codex Borgia (Nicholson 1963:96, 1966:150).

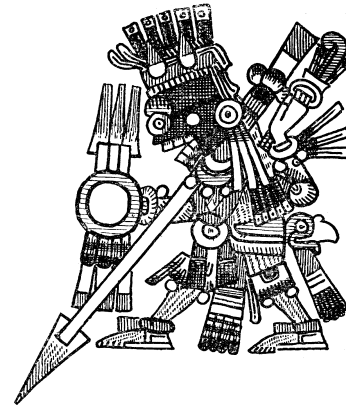
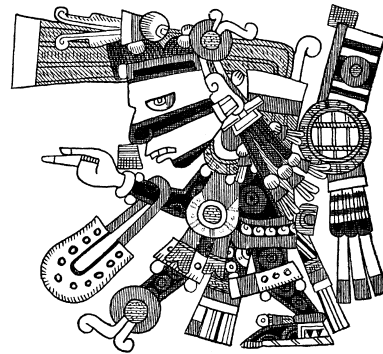
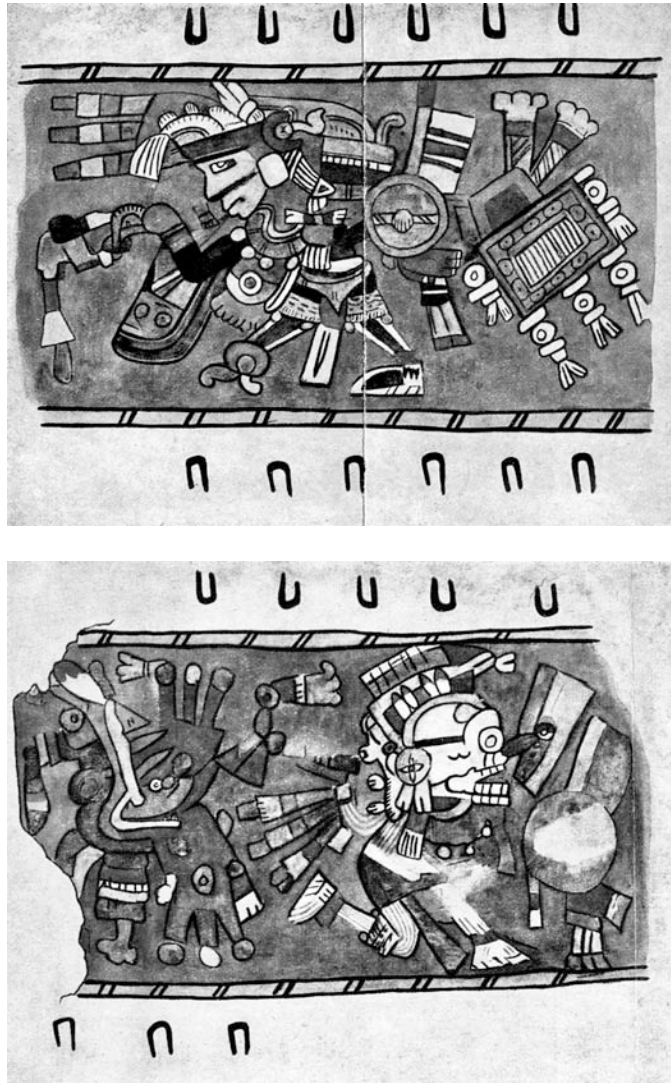


Fig. 131. Tezcatlipoca and Tlahuizcalpantecuhtli in the Tizatlan murals, compared with their images in the Codex Borgia (51, 53) (Tizatlan murals from Noguera 1929:pl. 1; Borgia images from Seler 1904–1909).

Although scholars have related the Borgia Group to both Mixtec and Cholulteca polychromes, comparisons with the ceramics from the Puebla-Tlaxcala basin are the most successful. Michael Lind (1967, 1994) compared Catalina polychromes from Cholula with Pilitas polychromes from the Mixteca Alta and valley of Oaxaca and recognized significant differences in vessel shapes, vessel supports, and design motifs. He found that they reflect their different cultural systems (Lind 1994:86–87). Both traditions used tripod *cajetes* (footed bowls) as drinking or offering vessels,

but one-third of the Pilitas (Oaxacan) polychromes are tripod ollas, pitchers, and tripod platters that do not occur among Catalina (Cholulan) polychromes. These forms were used by Mixtec elites for drinking chocolate and pulque at meetings and marriage ceremonies like those illustrated in Mixtec historical manuscripts such as the Zouche-Nuttall. Forty percent of Catalina polychromes are plates, hemispherical bowls, basins, and vases that do not occur in Pilitas; the hemispherical bowls and goblets do appear in the Borgia, however, as drinking vessels. Their design motifs also

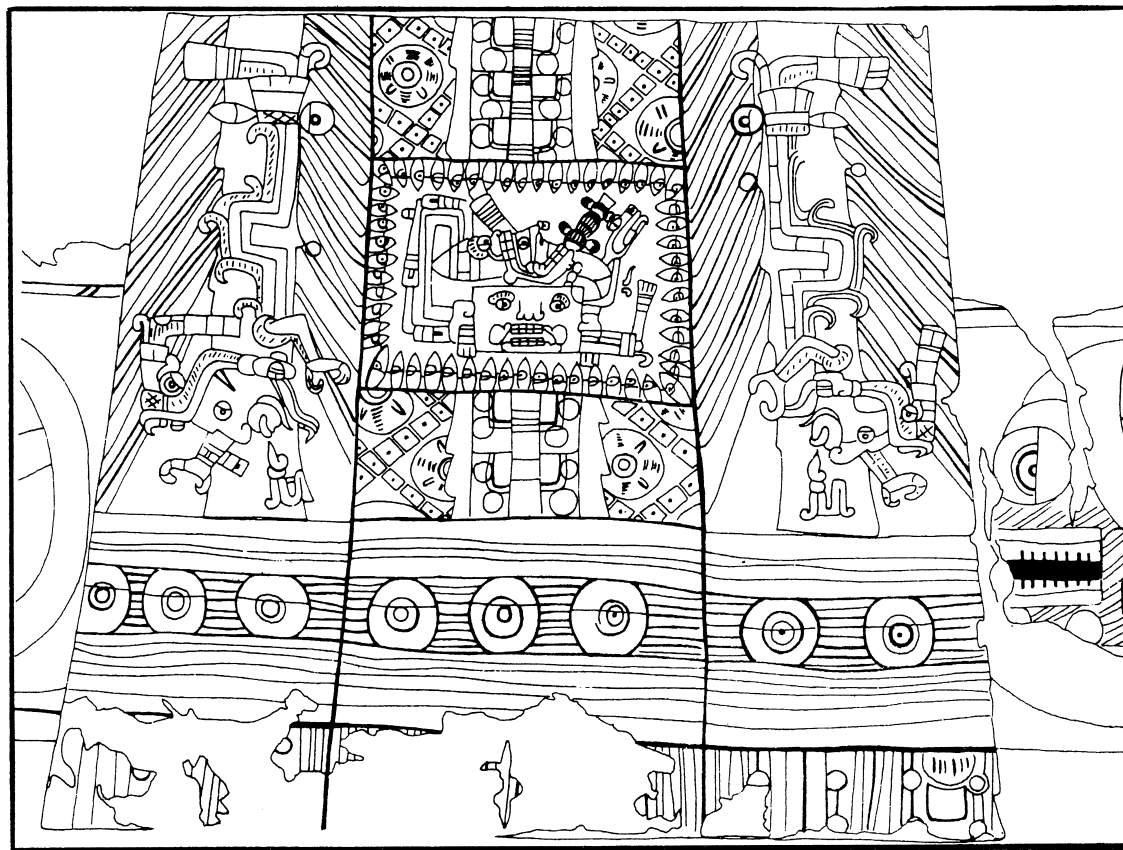


Fig. 132. South side of the polychrome altar at Ocotelolco: the face of Tezcatlipoca emerges from the mouth of an anthropomorphic flint within a flinted enclosure (from Contreras Martínez 1994a:116).

differed. Pilitas (Oaxacan) polychromes feature more animals and anthropomorphic figures that reflect specifically Mixtec gods, rituals, and religious themes. In contrast, Catalina polychromes reflect the religious bureaucracy of Cholula, with emphasis on auto-sacrifice and human and animal sacrifice; they feature bone and maguey thorn bloodletters, knives, skulls and cross-bones, balls of rubber and feathers, and incense bags (Lind 1994:97). In sum, the Borgia Group codices are closer to the Cholula polychromes than to the Mixtec ones.

Cholula polychromes are found in Cholula, Tepeaca, Tizatlan, and Chalco and appear probably as trade items in the Cinantla of northern Oaxaca, in southern Veracruz, and in the Soconusco region of Chiapas (Lind 1967:58). Independent work by Hector Neff and others (1994:122) has found a significant disjunction in the distribution of Oaxacan and Pueblan-Tlaxcalan

polychromes in the Postclassic. Although there was a great deal of exchange between the Pueblan and Tlaxcalan polities, there was relatively little overlap between them and the Zapotecs and Mixtecs in Oaxaca. This reflects understandings expressed by earlier scholars who felt that the Mixtec polychromes and Mixtec codices formed one stylistic group, while the Tizatlan murals, polychromes from Cholula and environs, and the codices Borgia and Cospi constituted a second stylistic group.²⁵

Specific images on Cholula ceramics and figurines from the region affirm this association. Quiñones Keber (1994:148–149) has pointed out that a depiction of the goddess Xochiquetzal on a Cholula plate is nearly identical to Xochiquetzal in the Borgia (16). Nicholson (1994:113–114) has shown that the complex motif of an eagle claw, tie, and double ears of maize, which is found on Catalina polychromes, finds its closest visual

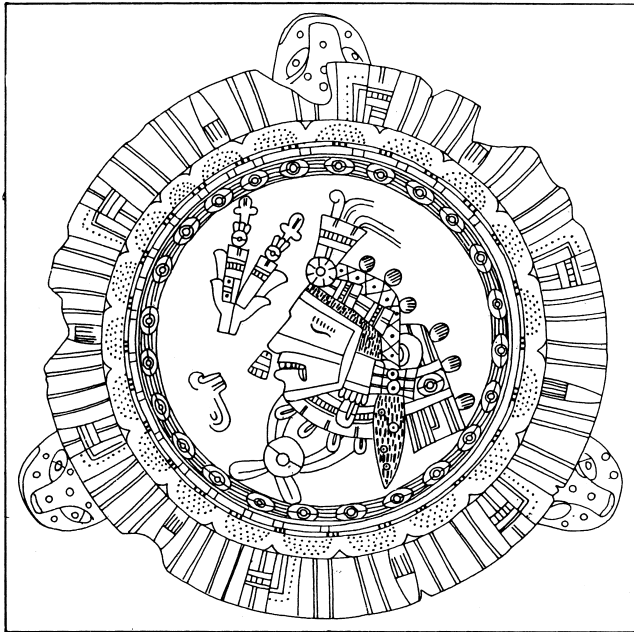


Fig. 133. Polychrome *cajete* featuring the head of Tezcatlipoca, from Ocotelolco (from Beltrán and Contreras Martínez 1994:107).

analogy in the Codex Cospi (Fig. 134), although similar motifs also appear in the Borgia and Vaticanus B. Bodo Spranz (1973b:219, 1982:166–170) has argued that costume features on figurines (especially of Xochiquetzal and Chantico) that were found at the Late Classic–Early Postclassic site of Xochitecatl compare well with their later counterparts in the Borgia. Finally, Gabriela Uruiñela and others (1997) excavated in Cholula a collection of over a hundred biconical god figurines, many of which represent the head of the rain god (Fig. 135). Identical figurines are held in the right hands of rain gods who appear on several pages in the Codex Borgia (27, 28, 37, 38, 75; Figs. 87, 88, Plate 8). Such biconical figurines are restricted to the Puebla-Tlaxcala area, where they are frequently found in excavations (Cholula was one place of manufacture); they have not been reported from other parts of Mesoamerica.²⁶ Their repeated use in the Borgia adds more evidence for a Puebla-Tlaxcala origin for that manuscript. The figurines are not seen in other Borgia Group codices.

It is the precision and the context of similarities such as these that make the stylistic and iconographic evidence for a Puebla-Tlaxcala origin for some of the Borgia Group so strong. The Borgia and Cospi

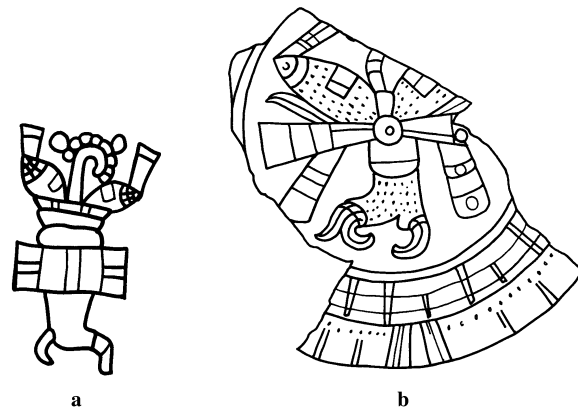
are closest to Puebla-Tlaxcala artifacts; the Fejérváry-Mayer, Laud, and Vaticanus B less so.

Gulf Coast A final area that has been suggested as the place of origin for some members of the Borgia Group (particularly the Fejérváry-Mayer and Laud) is along the Gulf Coast region of central-southern Veracruz, east and southeast of Puebla-Tlaxcala and north of the Mixteca. The evidence is sparse, relatively general, and therefore weak.

Several scholars have suggested that Borgia Group codices may have been among the painted books sent by Cortés to Charles V. They argue that Cortés probably obtained these books along the Gulf Coast, where later conquistadors also collected books, which would put the Borgia Group in that region.²⁷ There is little to support such suggestions, however, other than the early dates when several Borgia Group codices were documented as being in Europe. The books that Cortés sent were made of paper. Still, the suggestion appears from time to time.

Nicholson (1963:58, 1966:152) mentioned a few similarities to the material culture of Cempoala. He noted that a temple at Cempoala was decorated with clay roof battlements in the form of flint knives with fanged faces, like those pictured in the Borgia (50). He also reported that José García Payón (1949:471) thought

Fig. 134. Motif of an eagle claw, tie, and double ears of maize: a, in the Cospi (1–8), it replaces the image of Centeotl as one of the Night Lords; b, on a Catalina polychrome plate in the Phoebe A. Hearst Museum of Anthropology, University of California at Berkeley. Drawings by Heather Hurst.



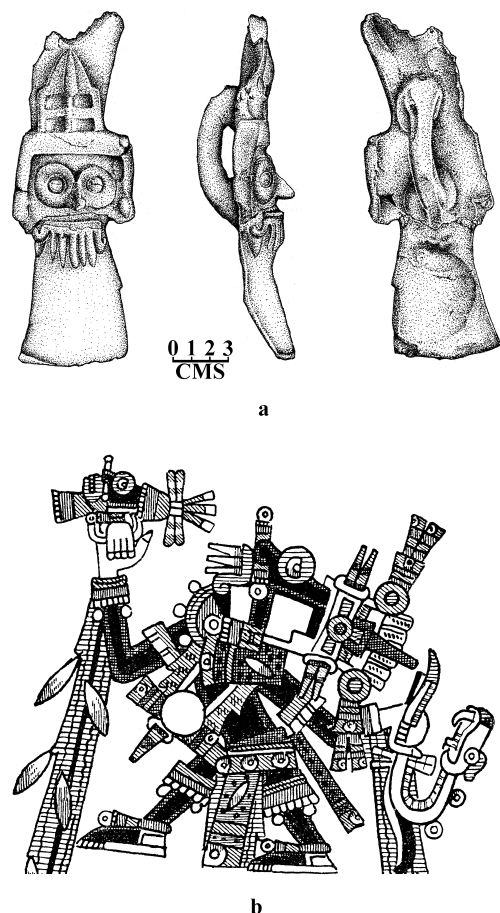


Fig. 135. Biconical figurines of the rain god: a, ceramic example excavated at Cholula (from Uruñuela et al. 1997: fig. 4); b, similar figurine held by the rain god on Borgia 28 (from Seler 1904–1909).

Cempoala polychrome was influenced by the tradition at Cholula. García Payón even called Cempoala a dependency of Cholula, but little hard evidence has ever been brought forth to support this assertion.

When Seler (1902–1923, I: 341, 1990–1998, I: 74) first suggested a provenience for the Borgia Group, he named the cities of Teotitlan, Tochtepec, and Coatzacoalco as possible locations. He offered no firm evidence to support his choices, but he identified the Coatzacoalco region with Tlillan Tlapallan, the “Place of the Red and Black” (or Place of Writing and Wisdom), the region of writing that figured prominently in Toltec legends. At the time of the Spanish invasion, Coatzacoalco was the center of a thriving Nahuatl-Popoloca province on the Gulf Coast, which was strong

enough to withstand Triple Alliance imperialism.²⁸ Teotitlan and Tochtepec were major trading centers along the route that led from southern Puebla and northern Oaxaca to Coatzacoalco. Tochtepec was the point of departure for long-distance merchants (*pochteca*) from central Mexico, who then continued either east to Coatzacoalco or southeast to Soconusco.

The codices most often proposed as having a potential Veracruz origin are the stylistic twins Fejérváry-Mayer and Laud. The reasoning usually includes their supposed Maya connections, a focus on merchants, and hints that costumes and accoutrements in these two codices might pertain to the coastal lowlands. Thompson (1966:171) was the first to suggest that the Fejérváry-Mayer and Laud “originated somewhere close to the Maya area, perhaps in Zoque or Popoloca territory, or among the Nahuatl-speaking groups in Veracruz or Tabasco.” At the time, Nicholson (1960:615) opined that they “perhaps originated in Veracruz (Cuetlaxtlan? The two codices sent by Cortés to Spain?)”; but he later (1966:155) retracted this because of insufficient evidence and the compelling stylistic affinities with the Mixtec codices. León-Portilla (1985:17) resisted naming a specific area and instead interpreted the Fejérváry-Mayer as a divinatory book specifically for the *pochteca*, “who, in their travels leaving Tlatelolco-Tenochtitlan or another point in the central region, crossed parts of Oaxaca and Veracruz to arrive at Xicalanco, establishing contact with the Maya.”²⁹

The Maya connections are visually suggested by the use of bar and dot numbers in the protocols of the Fejérváry-Mayer, some structural similarities with Maya codices (particularly the formée cross almanac of Fejérváry-Mayer I [Fig. 65, Plate 6], which is paralleled on Madrid 75–76), the appearance of possum-headed supernaturals in the Fejérváry-Mayer (38–45) and Dresden (25a–28a), and the appearance of Pinocchio-nosed merchant gods in the Fejérváry-Mayer.³⁰ Most of these Maya affinities fall away under further scrutiny, however. Bar and dot numbers appear in Epiclassic Xochicalco and Monte Alban and were used by the Mixtecs and Zapotecs in Postclassic and early colonial Oaxaca. Similarities between Borgia Group almanacs and their counterparts in the Codex Madrid are real (see Chapter 9), but the Maya versions are much more likely to derive from central Mexican sources than the other way around. The possum connection is too

general to be useful, especially considering their different contexts, for possums were widely regarded in Mesoamerica as having supernatural power.³¹

Merchants and other travelers are indeed emphasized in the twin codices; they are featured in five of the fifteen almanacs in the Fejérváry-Mayer and in the six-page ritual presented in the Laud (17–22; Fig. 100). Two of the merchant gods in the Fejérváry-Mayer (36, 37) have the bulbous “Pinocchio” nose characteristic of the Yucatec Maya merchant god, Ek Chuah; and several have red and blue face paint, as do some Maya examples.³² Whether these reflect specific knowledge of the Maya merchant god or a broader and more generalized merchant iconography is not known. If the Fejérváry-Mayer was indeed a “*tonalamatl* of the Pochteca,” as León-Portilla (1985) has argued, its use was not limited to the men who traveled. Some of its almanacs are general purpose (e.g., 1–4, 33b–34b); and others pertain to the growth of maize (33a–34a; Fig. 86, Plate 2), childbirth (23a–29a; Fig. 84), and marriage (35b–37b).

Other features possibly reflect a familiarity with the culture and fauna of the tropical lowlands toward the Gulf Coast. Two almanacs in the Laud emphasize the area’s mother goddess, Tlazolteotl. Patricia Anawalt (1981:849–850) has pointed out that women in the Fejérváry-Mayer and Laud are often bare-chested or wear a short *quechquemiltl*, as was the custom on the Gulf Coast. Men in both manuscripts have armbands and wield axes, as was customary on the Gulf Coast, although axes were also used frequently in the Mixteca. Finally, we see tropical birds in addition to the ubiquitous quetzal—notably red and yellow parrots and the roseate spoonbill—as secondary figures in some almanacs (e.g., Fig. 93, Plate 10).³³

Possible Origins

No area fits all the Borgia Group manuscripts perfectly; indeed, the manuscripts cluster into two or more groups stylistically and iconographically. The close relationship between the Fejérváry-Mayer and Laud is widely recognized. Scholars also generally accept that the Borgia and Cospi are painted in roughly similar styles, although the Cospi painter worked with a looser and more erratic hand. Elsewhere (Boone 1990) I have

shown that the Borgia Group bifurcates into two basic clusters, based on an analysis of three separate and corroborating lines of evidence: the proportional ratios of standing human figures, the conventions used for day signs, and the iconographic content of certain parallel scenes. I found that the Borgia, Cospi, and Porfirio Díaz Reverse are consistently more similar to each other than they are to the other members of the Borgia Group; likewise the Fejérváry-Mayer, Laud, and Vaticanus B share more features.³⁴ This is not to say that a manuscript in one cluster is not in some other way closer to a manuscript in the other cluster but that, in general, the clusters seem to hold. This bifurcation generally agrees with the findings of others who have related the murals in Tizatlan and Ocotelolco closely with the Borgia and Cospi but less so with the other codices. As García Granados (1942:442, 448) has shown, the Fejérváry-Mayer, Laud, and Vaticanus B have day signs that are closest to those in the Mixtec historical codices (see Fig. 126). We should also remember that the Vaticanus B pictures a Mixtec *ñuhu* and a solar creature with the Mixtec-style segmented bands around the eyes (Figs. 64, 129). This division also agrees with Sisson’s (1983:654) analysis of thatched roofs in the codices: the Vaticanus B shares the greatest number of thatched roof types with the Mixtec historical manuscripts, followed by the Fejérváry-Mayer and Laud. Roofs in the Borgia and Cospi are least like those in the Mixtec codices.

Codex Borgia The comparative evidence points to a Puebla-Tlaxcala provenience for the Codex Borgia, probably even Cholula, as Nicholson (1961:433, 1963:71, 1966:153–154, 1994:113–114) has long affirmed. Although the Borgia painter worked in a style generally similar to the Mixtec historical manuscripts and used the AO year marker, he was probably not himself Mixtec. He used a number of non-Mixtec conventions. For example, the Borgia AO lacks the usual O of the Mixtec AO, and its day signs are rendered slightly differently. Additionally, the Borgia painter eschewed the Mixtec convention of designating stone by colored stripes; instead, he used colored stripes to qualify wood on occasion (as in the precious tree on p. 44; Fig. 117) and designated parched ground as being stony by means of black curls and gray clumps (pp. 2, 19, 54).

Only a few supernaturals in the Borgia have particu-

larly Mixtec affiliations. Almost none have Mixtec-style calendrical names. The Borgia supernatural who has a mouth assemblage of a serpent, knotted bands, and flints may be related to the Mixtec gods 4 Serpent and 7 Serpent (Fig. 128), and the Tlazolteotls named 9 Reed and 1 Eagle (Borgia 47, 48) seem to correlate with Mixtec goddesses with these calendar names. Otherwise, however, there is a striking lack of other specifically Mixtec gods. When dates are associated with other Borgia gods, they are appropriate to the Nahuatl religious tradition (e.g., 4 Movement with the sun god). The *yahui*—the turtle/fire serpent sacrificer—who appears regularly in Mixtec codices (Caso 1964:27, 75; Smith 1973b:60–64) is not found in the Borgia. In the Borgia, the sun god has Aztec rather than Mixtec face paint, and the Venus god wears an Aztec style headdress.

The extremely close similarity between representations in the Borgia and images in the murals at Tizatlan and Ocotelolco points to Tlaxcala and adjacent Puebla. The Tizatlan paintings of Tezcatlipoca and Venus are looser versions of Borgia images but share the same iconography and costuming. The flint-knife scene at Ocotelolco is equally close thematically and iconographically to the birth of Quetzalcoatl in the flinted enclosure in the Borgia, and the Tezcatlipoca head on a footed plate from Ocotelolco shares the same face paint and costuming with Borgia Tezcatlipocas. Motifs on ceramics from Cholula—Xochiquetzal and the tie/eagle-claw/maize motif—have counterparts in the Borgia. Ceramics that are diagnostically Cholulan, including the biconical rain-god figures, are pictured in the Borgia. The emphasis on Tezcatlipoca also points to the region around Cholula. One of his major shrines was just to the west near Atlixco, and he was a prominent deity throughout the Puebla-Tlaxcala region.

The only drawback to locating the Borgia near Cholula is its dissimilarity to early colonial manuscripts from the area (Nicholson 1963:44–47). The *Historia Tolteca-Chichimeca* and Cuauhtinchan Maps 1 and 2 use purely Aztec day signs and are painted with a greater degree of naturalism. This may, however, reflect their colonial production or represent a different pictorial tradition operating in the same area.

Codex Cospi Much of the same evidence that identifies a Puebla-Tlaxcala provenience for the Borgia pertains to the Cospi as well. The painting style of the Tiza-

tlán and Ocotelolco murals is usually considered to be even closer to the style of the Cospi, with its sketchy linework and large-headed human figures. We also see some potentially phonetic references to Nahuatl as the language of the painter. In representing the Lord of the Night, Tepeyollotl (Hill Heart in Nahuatl), the Cospi painter depicts a snow-capped hill with a heart, which yields Tepeyollotl's Nahuatl name. The snow-capped hill must, of course, refer to one of the nearby volcanos. When the painter represented the god of frost, Itztlacolihqui in Nahuatl, he depicted him with a curved headdress, which refers to the *col* of *coltic* (curve) and functions as a phonetic signifier.³⁵ These data all suggest a Nahua painter working near Tlaxcala.³⁶

Codex Vaticanus B The Vaticanus B features Tezcatlipoca and lacks the AO year designator where the cognate almanac in the Borgia employs it. One of its representations of Itztlacolihqui also has a curved headdress (60), which might suggest a Nahuatl affiliation. Because of its sloppy execution, some scholars have said that its painting style may not be Mixtec (Robertson 1966:309–310), while others have seen similarities with Vienna Reverse and have therefore called it Mixtec (Nowotny 1961:15, 2005:8; Jansen 1978:114); still others have characterized it as provincial (Nicholson 1963:79, 1966:154), but it is clear that the quality of the painting does not help much to determine provenience.

In terms of its pictorial conventions and iconography, the Vaticanus B has more Mixtec elements than do other manuscripts of the Borgia Group. The day signs consistently follow Mixtec conventions, even to the point where the painter twice represented Lizard by a head only (71, 95; Fig. 64); a disembodied head is often used for Lizard in the Mixtec codices, but a full figure is always otherwise used in the Borgia Group and Aztec manuscripts. The Vaticanus B painter also substituted a jaguar paw for the day sign Jaguar (4), which may be a Mixtec practice (e.g., Lord 8 Deer Jaguar/Jaguar Claw). Mixtec supernaturals appear in the Vaticanus B: the god with the serpent-tie-flints mouth assemblage (4 Serpent and 7 Serpent in Mixtec codices), as in the Borgia, and a Mixtec *ñuhu* or earth spirit (72). One of the solar creatures additionally sports the segmented bands around the eyes (Fig. 64), as found on Mixtec sun gods and in the

Cuicatec Porfirio Díaz Reverse. A possible Mixtec phonetic reference is the appearance of a water-filled cave under a maguery plant (40) where cognate almanacs have Mayahuel; as Jansen (1978:114) has pointed out, maguery and cave are both *yahui* in Mixtec. This combination of Nahuatl and Mixtec features suggests a location on the edge of the Mixteca, where Nahuatl and Mixtec traditions mixed.

Códices Fejérváry-Mayer and Laud It is generally agreed that these stylistic twins originated in the same location; they may even have been painted by the same artist. Like the Vaticanus B, they seem more Mixtec than Aztec, with hints of the tropical lowlands of the Gulf Coast. Their Nahuatl features include the prominence of Tezcatlipoca in the two almanacs that open and close the Fejérváry-Mayer (pp. 1, 44; Fig. 65, Plate 6). The Fejérváry-Mayer also designates year signs by encircling them, which is an Aztec/Nahuatl convention.³⁷ Like the Borgia and Vaticanus B, it uses as year bearers Rabbit, Reed, Flint, and House, which are the year bearers used by the Nahuas, Mixtecs, and others but not by the Cuicatecs or Tlapanecs. Their Mixtec characteristics include day signs that closely follow Mixtec conventions. In fact, their day signs are nearly identical to those of the Zouche-Nuttall and Vienna (Fig. 126), as are their human proportions. Deities that are diagnostically Mixtec do not appear, but a god with solar affiliations who is associated with the day 1 Death recalls the sun god's calendrical name among the Mixtecs. Elements potentially referring to the Gulf Coast include the propensity of the females to be bare-breasted or to wear short shoulder capes, an emphasis on Tlazolteotl in the Laud, and tropical birds. The almanacs in the Fejérváry-Mayer emphasize travel and merchant activity. This confluence of Nahuatl, Mixtec, and potentially Gulf Coast elements points to an area where the three meet; the trading centers of Teotitlan del Camino and Tochtepec are likely choices.³⁸

The probable origin points for the Borgia Group codices form a large, tilted ellipse that extends along its length from Tlaxcala and Cholula in the northwest to Cuicatlan and the Mixteca Alta in the southeast, and along its width from Tochtepec in southern Veracruz to Acatlan in the Mixteca Baja. This area, flanked on the west by the volcanic range that includes Popocate-

petl and Itztaccihuatl, includes the highland valleys of Puebla-Tlaxcala and Tepeaca. On the east it includes semitropical mountainous zones that give way to the broad coastal plain along the Gulf. On the south it embraces the Mixteca Alta and Baja and neighboring zones. In this area resided peoples of different ethnicities and cultural and political traditions, sometimes even within the same polity, who spoke Nahuatl, Popoloca, Chocho, Mazatec, Mixtec, Cuicatec, and Otomi (Sisson 1983:655). Tehuacan, Cozcatlan, and Teotitlan del Camino, for example, were Nahuatl-speaking communities within a region that was otherwise Popoloca, Mazatec, and Cuicatec (Pohl and Byland 1994:194; Gerhard 1972:260–264, 305–309). The area was neither firmly Aztec nor Mixtec; rather it was the ground where these strong cultural, aesthetic, and iconographic traditions came together with other local strains. It is just such an area of mixed cultural identity that is likely to produce manuscripts that show a blending of features and content from several ethnicities.

Nicholson (1963:102), among others, has proposed that Puebla and western Oaxaca was the site of a major cultural synthesis, which developed in Late Classic/Epiclassic and Early Postclassic times and grew into the Mixteca Puebla Horizon Style. That horizon style, carrying with it religious ideology, symbolic systems, iconography, and aesthetics, came to exert its influence throughout Mesoamerica.³⁹ It may have been at this time that the divinatory system conveyed in the Borgia Group codices, which was ultimately shared by Aztecs and Mixtecs alike, was canonized. The Codex Borgia has often been called the principal exemplar of the Mixteca Puebla style. It is a late product of this system, as are the other codices of the Borgia Group.

Cholula has often been singled out as the principal agent for the development and spread of the Mixteca Puebla style and symbol system. It was the leading religious and mercantile center of western Mesoamerica as well as one of the most prominent pilgrimage sites, drawing devotees from great distances and exerting a cultural influence well beyond the Puebla Basin (Nicholson 1994:114). Its main temple-pyramid, dedicated to Quetzalcoatl, was much older than Tenochtitlan's Templo Mayor and exceeded it in grandeur. Because of Cholula's size and status, one is tempted to see the metropolis as the originator and principal exporter of the Mixteca Puebla style. The ideological and picto-

graphic synthesis that is the Mixteca-Puebla phenomenon, however, is perhaps best described not in terms of core-periphery but as a system of interaction (Anders, Jansen, van der Loo 1994:96), in which Nahuatl, Mixtec, and many other peoples participated actively in economic and ideological exchanges. Within the region, polities like Cholula, Cuauhtinchan, Acatlan, Tehuacan, and Coixtlahuaca were linked by royal marriages (Pohl 2003d:244–247), and the rulers of Tlatelolco were married into royal families in southern Puebla (Gorenstein 1973:16).

It is also significant that the area is traversed by some of the most important trade routes in Mesoamerica, which linked the Basin of Mexico to both coasts and the Maya region. Although merchants from Mexico-Tenochtitlan, Azcapotzalco, and Culhuacan could reach the Gulf Coast near Cempoala by journeying east through Huexotla, the more usual route to the east dropped southeast through Chalco and Amecameca and continued between the volcanos through the Pass of Cortés to Cholula. This principal route then followed the edge of the central mesa: linking Cuauhtinchan, Tepeaca, Tecamachalco, Tehuacan, Teotitlan, and Tochtepec on the Santo Domingo River, a tributary of the Papaloapan. Cholula and Tepeaca were large, international trade centers that functioned as critical buffers and points of exchange along the Aztec-Tlaxcalan border. Tochtepec was a major international trade center, a gathering place for Aztec *pochteca* as well as others (Sahagún 1953–1982: bk. 9:17, 48–49, 51). It gave access to the coastal plains on both sides of Mesoamerica: one route out of Tochtepec went east to Coatza-coalco and Xicalanco; the other ran southeast through

Chiapas to Xoconochco and Guatemala. A major trade route also ran from Cholula, Huejotzingo, and Tlaxcala northeast to the Gulf Coast. Still others, tied to the large market city of Coixtlahuaca in northern Oaxaca, reached south to link the rest of the Mixteca Alta and Oaxaca, including Tututepec near the Pacific coast; according to Durán (1994:182–183), Coixtlahuaca's great market was frequented by merchants from Tenochtitlan, Texcoco, Chalco, Xochimilco, Coyoacan, Tlacopan, Azcapotzalco, Toltitlan, and "other regions."⁴⁰ Most of these centers of trade operated independently until several (e.g., Cuauhtinchan, Tepeaca, Coixtlahuaca, Tehuacan, Tochtepec) were conquered by the Triple Alliance empire and came under Aztec control; still, they continued to draw and serve foreign traders.

Politics in this region, connected by a strong web of trade routes, tribute obligations, and marriage alliances, were constantly engaged in active exchange with each other.⁴¹ Mexican pictography was another of the agents that linked them. As a common script that was mutually intelligible across linguistic borders, it carried a symbol system that was easily comprehended by anyone trained in its visual conventions and grammar, regardless of the language spoken. In this context, we should not be surprised that peoples in different polities shared a common ideology and divinatory system or that their pictorial almanacs should look so much like those of their near and distant neighbors. The painted codices were the active carriers of translingual signs and the transethnic ideology that they recorded. Their very mobility helped to integrate and spread a single divinatory ideology throughout central Mexico.



A Mexican Divinatory System

Variations and Commonalities

The exact provenience of the divinatory codices has been so hard to determine because they contain very little that is local. In contrast to the historical documents, which tend to reflect the politics and perspectives of their particular towns, the books of fate are largely silent about their own origins. They include no named humans, no named polities, no concrete historical events (except possible celestial phenomena), and no specific place signs other than the cardinal directions. Even when the cardinal directions are represented by individual place signs, as they are in Aubin No. 20 and the Codex Porfirio Díaz Reverse, these signs refer not to political entities governed by known families but to sacred locations relevant to many peoples. The divinatory codices do not seem to present local or regional realities; rather they participate in a broadly shared ideological system that concerns the cycles of time and the gods and forces linked to these cycles.

In the multilingual and multicultural world that was Late Postclassic Mesoamerica, one might assume there to have been great variation within religious and divinatory beliefs. This was the intellectual area that was

most closely guarded by the temple priests and daykeepers, and this was the realm that required the most training and the most esoteric knowledge to master. Since most priests and daykeepers probably did not travel widely, their knowledge would have been acquired locally and disseminated within the community. Thus, we would expect that the temples and *calmecac* of each ethnic group, and perhaps even each polity, would have developed their own secrets and emphases over the years.

We do, of course, find considerable variation in religious practices and almanac production. Some gods are more relevant to the Mixtec rather than the Nahua sphere, for example, and vice versa; Mixtec and Aztec versions of many major gods (e.g., 9 Wind/Quetzalcoatl) belong to separate narrative traditions. Additionally, patron gods can vary from city to city in the same region. The Aztec divinatory books look and feel rather different from the Borgia Group ones, and this is not simply because the Aztec books are made of paper whereas the Borgia Group books are made of hide.

The extant Aztec manuscripts stand out because most of them present a single, abundant presentation of the *trecenas* and the various patrons of their days, instead of the many and varied almanacs of the Borgia

Group. This fully elaborated *trecena* almanac is packed with multiple layers of mantic content, which in the Borgia Group is scattered over several different almanacs. The Aztec versions include not only the *trecena* days and patrons but also the Lords of the Night and sometimes the Lords of the Day and Volatiles as well. The Tonalamatl Aubin and the Codex Borbonicus—the most indigenous in style of the Aztec *tonalamatls*—are the fullest in their treatment, but the Telleriano-Remensis and Vaticanus A/Ríos also include the Night Lords. The variant *tonalamatl* in the Codex Tudela includes both the Night Lords and the Volatiles.

We might wonder whether this tendency to pack the *trecena* almanacs with an abundance of mantic content is a colonial feature, because all these manuscripts are arguably postconquest. It could represent a colonial painter's attempt to present all the potentially related elements in a single almanac, to create, in essence, an epitome for his Spanish patron. I think this scenario is unlikely, however, because the Tonalamatl Aubin and Codex Borbonicus were created in very different places and environments (one in provincial Tlaxcala and the other in metropolitan Culhuacan) but have virtually the same iconographic content and structure. If the packing and layering of mantic elements were a colonial innovation, we would expect more varied results. This fully elaborated *trecena* almanac does seem to reflect an Aztec preference.

The original corpus of Aztec almanacs may once have been more varied, however, than is the existing pictorial sample. Aztec divinatory books, like their Borgia Group counterparts, may once have contained a wide variety of almanacs, including those that employ spacers. The Borbonicus includes, in addition to its great *trecena* almanac, two others that focus on the Lords of the Night (21–22). The Vaticanus A/Ríos reproduces a corporeal almanac of the twenty day signs (Fig. 61), and one of its texts (71rv) describes an almanac that organizes the *trecenas* as a compressed table (employing spacers) according to the four directions, like that on Borgia 49b–53b. The Tudela has a deer-skin almanac of twenty days that is analogous to the one in the Borgia (compare Figs. 60, 44). It also contains a full *tonalpohualli* presentation, with the *trecenas* divided into sixty-five-day periods or *cocijos* (Figs. 54, 66, Plate 3), that is iconographically like Borgia 75–76 (Fig. 76); Cervantes de Salazar (1971, 1:143–144) de-

scribes a similar almanac. Durán's (1971:399–404) explanation of the fates of the day signs was based on an almanac “painted on an old paper of ancient times” that linked each of the twenty day signs to its patrons and forces, probably like those day-sign almanacs in the Borgia and Vaticanus B (Figs. 34–36, 56–58).¹ These references to other kinds of almanacs suggest that although the fully elaborated *trecena* presentation was a favored Aztec type, others were used as well.

Commonalities in the manuscripts greatly overshadow their differences, for there is a striking correspondence in the mantic content of the Aztec and Borgia Group manuscripts. This correspondence does not merely obtain on a general level, where, for example, rain gods are understood to bring or withhold beneficial and harmful rains; it extends even to some of the smallest details. The Aztec and Borgia Group traditions use the same iconographic conventions; they recognize the same gods and mantic forces (with some variation), and they consistently link them to the same units of time. They subdivide the 260-day calendar into the same sets of smaller cycles and structure these cycles graphically in the same ways. The correspondences among the manuscripts are so many and so exact that it can be said that a single divinatory system operated widely across central and southern Mexico.

As detailed in Chapter 8, the surviving Postclassic Mexican divinatory codices come from the valley of Mexico, Tlaxcala, Puebla, Oaxaca, and possibly the Gulf Coast. They were painted by peoples who spoke Nahuatl, Mixtec, Cuicatec, and perhaps Otomi, Chocho, and other languages, and by peoples who, like the Aztecs and Tlaxcalans, were bitter enemies of each other. Yet, despite their ethnic differences and their geographic distance from each other, they were bound together by a common iconographic repertory, divinatory canon, and pictographic writing system. A calendar priest from one region would therefore have found it easy to divine from a manuscript that was painted in another region. A few examples provide a sense of this remarkable equivalence.

The most common almanac in the books of fate was the 260-day *tonalpohualli* divided into the twenty *trecenas*; each *trecena* was presented with its patrons and characterizing symbols. Versions of this almanac are included in the Borbonicus (valley of Mexico), Tonalamatl Aubin (Tlaxcala), Telleriano-Remensis (valley of

Mexico), Borgia (Cholula area), and Vaticanus B (near the Mixteca Alta) (Figs. 46–50, Plate 1). As explained in Chapter 5, all these manuscripts present the same general prognostications for each *trecena*. The fourth *trecena*, for example, is presided over by the Old Coyote, called Huehuecoyotl in Nahuatl, a god of dance and song, oratory, deceit, and sexuality; all the versions assert the *trecena*'s festive nature. Each codex may emphasize slightly different aspects: the Tonalamatl Aubin and Borbonicus focus more on the musical, for example, whereas the Borgia and Vaticanus B stress dance. Nevertheless, all the manuscripts share individual features with the others, and all but the Borbonicus specify debauchery. A subtle iconographic divide between the manuscripts of the Aztec tradition and those of the Borgia Group is bridged by many common elements. The similarities and shared elements in the *trecena* panels outweigh their differences and indicate a unity of understanding, not just for this *trecena* but for all twenty of them.

Another example of this commonality of the specific is the appearance and associations of the five Cihuateteo (the souls of the women who have died in childbirth), who accompany the sun from noon to sunset. Images of these dangerous females appear in the Borgia, Vaticanus B, and Aubin No. 20, where they are paired with the five Macuiltonaleque, poorly understood gods associated with pleasure, lust, and actions of the hand such as gaming, luxury crafts, and thievery, who perhaps also represent the souls of deceased warriors and companions of the sun.² In the Borgia and Vaticanus B, the Cihuateteo are associated with the five *trecenas* of the west, and the Macuiltonaleque are associated with the five *trecenas* of the south (Fig. 70). Aubin No. 20 pairs the Cihuateteo and Macuiltonaleque individually and locates each pair in one of the four cardinal directions and center (the fifth direction) (Fig. 68). In all cases, however, the Cihuateteo are linked to specific days (1 Deer, 1 Rain, 1 Monkey, 1 House, and 1 Eagle), and the Macuiltonaleque are linked to other days (5 Lizard, 5 Vulture, 5 Rabbit, 5 Flower, and 5 Grass), which thereby name them. In all cases, the males and females are paired the same way: 1 Deer with 5 Lizard, 1 Rain with 5 Vulture, 1 Monkey with 5 Rabbit, 1 House with 5 Flower, and 1 Eagle with 5 Grass.

The surviving painted books and ethnohistorical sources from the valley of Mexico do not specifically

link the Cihuateteo and Macuiltonaleque, but they do indicate that both groups were active supernaturals in the Aztec realm. Sahagún's Florentine Codex pictures and describes Macuiltonaleque named 5 Flower, 5 Rabbit, and 5 Lizard (who was a standard bearer beside Huitzilopochtli's temple). In the valley of Mexico, the Cihuateteo were known to descend and cause harm to children on the days 1 Deer, 1 Rain, 1 Monkey, 1 House, and 1 Eagle, which are their days in the Borgia Group almanacs. Stone sculptures of the Cihuateteo excavated in Mexico City have one of these dates carved on the top of their heads (Nicholson and Quiñones Keber 1983:67–68). All this indicates that these specific minor supernaturals, and their associations, were held in common by the Mexica Aztecs in Tenochtitlan as well as the peoples in Puebla and Oaxaca.

The ideology associated with Venus as Morning Star was also shared by peoples living from north of the valley of Mexico down to Oaxaca. Venus almanacs appear in the Borgia, Cospi, and Vaticanus B manuscripts, where Venus as Morning Star spears various forces such as the maize goddess, the water goddess, and a throne to represent rulership (Figs. 90, 91, Plate 9). As explained in Chapter 5, the meaning behind such specific images is illuminated by passages in Sahagún's Florentine Codex and in the *Anales de Cuauhtitlan*, texts from the valley of Mexico and northward that speak of the peril that the Morning Star brings. The *Anales de Cuauhtitlan* specifically describes Venus as a shooter who aims darts at entities like those pictured in the Borgia Group codices. The Nahua annals reveal the rationale for imagery that was painted in the almanacs much farther to the south.

A great many other examples of shared iconography and aspect could easily be cited to show how close the almanacs and prophetic messages were in the valley of Mexico, Tlaxcala, Puebla, the Mixteca, and neighboring Veracruz. A number of these are discussed in Chapters 5 and 6, where the almanacs and protocols are explained. The Borgia Group codices, although painted in different areas, are linked precisely because they contain so many cognate almanacs with virtually identical content. This sameness, which embraces Nahuas, Mixtecs, and others, can only be the result of a common divinatory ideology that was widely shared throughout central and southern Mexico.

Mexico and the Maya

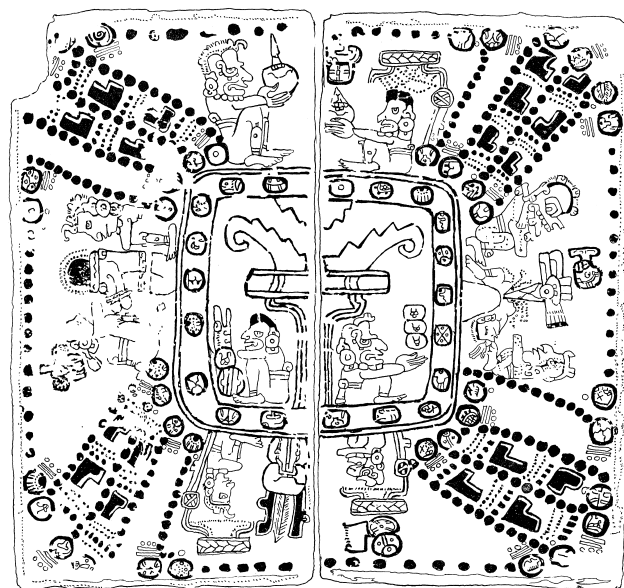
In late Postclassic times, this Mexican ideology also spread into the Maya area, probably following trade routes plied by the long-distance merchants. There Mexican gods, iconographic forms, and almanac structures affected the divinatory expressions of the Maya. Although the Mexicans and the Maya both participated in the greater Mesoamerican cultural system and shared many of the same general deities and expressions, the Maya kept their own distinct traditions. Their codices also belong to another graphic tradition entirely, one that employs both glottographic (logosyllabic) glyphs and images to record mantic and other information. The surviving Maya codices are largely divinatory, but their almanacs are structured differently than the Mexican ones and tend to be topical rather than multipurpose; the Maya codices also have complex astronomical tables lacking in Mexican codices. In fact, the Maya codices are in general so different from the Mexican ones that correspondences between them are noticeable. Such correspondences do exist in three of the four existing Maya codices, however. They show that some Maya people were attuned to Mexican divinatory and religious traditions and selectively borrowed from them on occasion.

In the Maya Codex Madrid, two almanacs stand out from the others because of their deviant structures, which are so at odds with the other almanacs in the codex. In fact, they mimic almanacs of the Borgia Group. The most often cited of the two is the “cosmogram” painted on Madrid 75–76 (Fig. 136), where the days of the 260-day cycle are organized as a formée cross according to the four directions, as they are on the famous first page of the Codex Fejérváry-Mayer (Fig. 65, Plate 6).³ In both almanacs, the twenty *trecenas* (represented by the first day of each *trecena* followed by twelve spacers) inscribe a path that runs counterclockwise around the arms of the cross as well as the intercardinal loops between the arms; each arm pertains to a cardinal direction, with paired gods and rituals pictured within. The details differ, to be sure, for the Maya version features different gods and rituals and includes the glyphic name for each direction. The Maya version also gives the coefficient as well as the day sign of the first day of each *trecena*, and it redundantly names the

last day of each *trecena* as well (day sign + coefficient). It also lacks a second almanac (which the Fejérváry-Mayer has) along the intercardinal loops. Other than these details, however, the two are remarkably similar; they share the identical structure. The cross almanac is so unlike other Maya presentations that it surely derives from a Mexican prototype.

The seven-page almanac, often called the serpent almanac, on Madrid 12b–18b is also structured very differently than the other Madrid almanacs (Fig. 137). As Bryan Just (2000, 2004) has pointed out, this is because it imitates the eight-page *in extenso* almanacs that open the Borgia, Cospi, and Vaticanus B, where all 260 days of the full cycle are pictured in five long rows of fifty-two days each (Figs. 39, 40). The Madrid painter attempted the same feat: following an introductory panel, he began to paint all the day signs in four long rows running from left to right across a series of six pages. Because he used four rows rather than the five of the Borgia Group, however, he needed to paint sixty-five days in each row. Unfortunately, he misjudged the spatial requirements and did not allow himself enough space for all sixty-five; he would have needed another page to fit them but did not have it. He thus stopped after fifty-two days in each row (leaving behind some

Fig. 136. Cross almanac in the Codex Madrid, pp. 75–76 (from Villacorta and Villacorta 1933).



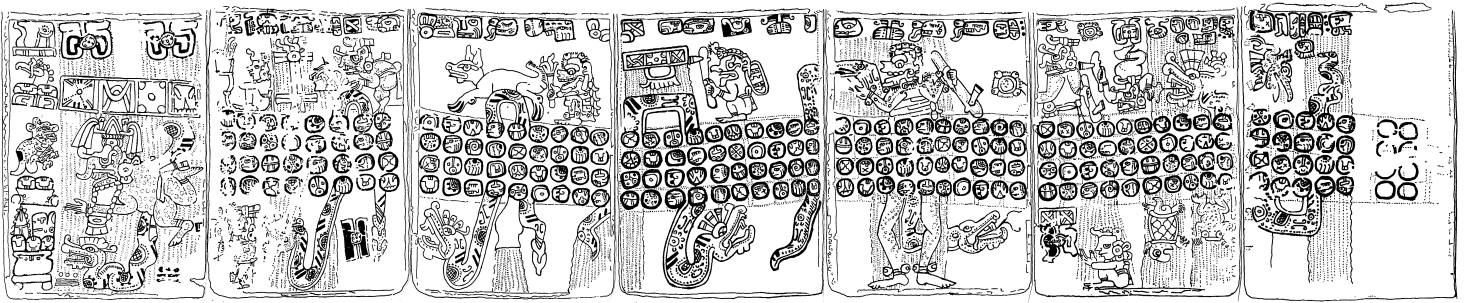


Fig. 137. Serpent almanac in the Codex Madrid, pp. 12b–18b (from Villacorta and Villacorta 1933).

preliminary outlines of the extra signs); he then designated the final *trecenas* by adding a coefficient and distance number to the introductory panel. Still, his goal was an almanac like the *in extenso* ones of the Borgia Group.

Other almanacs in the Madrid may also reflect borrowings from almanacs like those in the Borgia Group. These include a 1 Imix *trecena* almanac (77–78), the “year-bearer pages” (34–37), and planting almanacs (24–33) (Just 2004; Hernández 2004; Hernández and Bricker 2004).

The presence of these two Mexican-style or, more precisely, “Borgia Group-style” almanacs in the Codex Madrid (and the Mexican affinities of others) indicates that the Madrid painter must have seen and probably handled Mexican divinatory manuscripts and appreciated the mantic possibilities of their structure. His errors indicate he had not fully mastered the Mexican system, however. The users of the Madrid must also have been familiar enough with the Mexican forms to accept them as equally serviceable as, or even an improvement on, traditional Maya presentations.

Mexican influence is also apparent in the Codex Dresden, although not to the same extent as in the Madrid. The painter of the Dresden did not borrow Mexican structures for any of his almanacs or use Mexican stylistic conventions, but he did insert Mexican gods into his presentation of the cycles of Venus. In two of the five sections of the Dresden Venus almanac, the painter included Nahuatl deities—specifically the fire/year god Xiuhtecuhtli and the blindfolded god Ixmiquilli—rather than Maya deities, although he painted them in the Maya style (Fig. 138). The glyphic texts that accompany these panels spell out the gods’ Nahuatl names phonetically; as with the gods’ images,



Fig. 138. Xiuhtecuhtli in the Codex Dresden, p. 49 (from Taube and Bade 1991:14).

the painter has given us a Mexican content rendered in the Maya tradition.⁴ This insertion of Mexican gods, painted and glyphically named in the Maya manner, suggests that the Codex Dresden’s Maya audience was familiar with Mexican gods and their aspects.

These Mexican features in two of the surviving Maya codices show that the broadly shared ideological and iconographic system of central Mexico penetrated parts of the Maya realm as well.⁵ Mexican codices clearly reached Maya eyes and hands. They must have been brought by diviners who accompanied long-distance merchants, armies and governmental officials of the expanding Aztec empire, emissaries from other polities, and royal marriage partners (Boone 2003). The very portability of the books and the extralinguistic nature of Mexican pictography meant that Mexican divinatory beliefs and Mexican almanacs could travel be-

yond their geographic and linguistic core. The books themselves fostered the spread of a vast body of knowledge about calendrical cycles, the gods, and divinatory associations.

Extirpations and Survivals

The integrity of the Mexican divinatory system and the books that sustained it did not long survive the Spanish conquest. Books of fate, containing as they did protocols for ritual action and being full of “dreams, illusions, superstitions and omens,” to use Motolinia’s (1951: 74) words, were specifically targeted by the Spaniards for destruction. These were the dangerous books gathered up for the great bonfires. Few under Spanish rule would admit, at least to European friars and administrators, to owning divinatory codices. Calendrical divination quickly went underground.

The case of Don Carlos Ometochtzin, lord of Texcoco, illustrates the situation well. Don Carlos was the grandson and son of the celebrated preconquest rulers Nezahualcoyotl and Nezahualpilli, who were also widely renowned as diviners and sages. After the conquest, Don Carlos was reared in the household of Cortés; he was baptized in 1524 and then educated by the Franciscans at the Colegio de Santa Cruz in Tlaxcala (Greenleaf 1961: 68). With the death of his brother Ixtlilxochitl in 1531, Don Carlos assumed rule of Texcoco. Everything—his rearing, schooling, and place in postconquest society—would suggest his successful conversion to Christianity and adaptation to Spanish governance.

This was not the case, however, for in 1539 Don Carlos was charged with idolatry and heretical dogmatizing (Greenleaf 1961: 68–75). In addition to preaching against Christianity, he had been caught possessing a *tonalamatl*, along with many “idols” found in his palace at Oztoticpac (*Proceso* 1910: 7; Cline 1966: 104). In an extraordinary decision, he was found guilty of heresy and condemned to death. The execution of Don Carlos, one of the most powerful indigenous rulers in Mexico at the time, raised a storm of protest in Spanish circles among those who felt that the Mexicans, as recent converts, should be exempt from the Inquisition. For the indigenous community, the case served as a particularly alarming warning to other rulers and nobles

who might engage in similar practices: they would not be exempt from prosecution. According to the Texcocoan chronicler Juan Bautista Pomar (Acuña 1982–1988, 8: 46–47), the case of Don Carlos pushed these nobles to destroy whatever painted books they might still have in their possession.

Not all the divinatory and religious manuscripts were so destroyed, however. A few were brought forth in order to be copied under Spanish supervision so their content could be preserved in pictorial encyclopedias of indigenous culture used by the friars. Such copies appear in the codices Telleriano-Remensis, Vaticanus A/Ríos, and Tudela. Fifty years after the conquest, enough other religious codices survived hidden in houses and sacred locations to bring forth complaints by Diego Durán about persistent idolatry. Although Durán (1971: 54–55) lamented the destruction of painted books and the loss of the knowledge about religious practices that they contained, he also decried their continued use. He complained about Nahuas who slid a Catholic feast to agree with an ancient feast and who chose a patron saint because the saint’s feast fell near an ancient one or on their birthday (Durán 1971: 409–410). He sadly recognized that calendrical divination still was being practiced.

Finally, I suspect that regarding these things the natives still follow the ancient laws and that they await the correct time according to the calendrical symbols. There are few places where the ancient calendars are not kept in hiding, consulted often, and taught to the new generation so that this system will not fall into oblivion *in aeternum*. (Durán 1971: 397–398)

Except for those few that found their way early into museums and libraries, all the painted divinatory books perished long ago. Today most indigenous diviners mark time and read fates largely according to the Gregorian calendar and in tune with the festival cycle of the Catholic church (e.g., Sandstrom and Sandstrom 1986: 65; Sandstrom 1991: 280). But vestiges of the old system have endured, despite 500 years of Christian instruction, and divination involving the 260-day calendar still continues in a few traditional communities. Maya daykeepers in some Quiche and Ixil towns still count out the days in the sacred count, reaching their prognoses by concurrently casting grains and crystals

and by reading the pulsings of blood.⁶ This reminds us very much of the ancient Aztec practice of divining by casting grains and beans, especially for illness.

As late as the 1950s, diviners in several Mixe and southern Zapotec towns in Mexico were building fates on the sacred count.⁷ For the Mixes in Zacatepec, a person's birth day name continued to shape his or her fate, and feasts were scheduled according to the ancient calendar. Even in the 1980s traditional priests in some Mixe communities still were looking to the divinatory calendar to determine the propitious days for rituals (Lipp 1982, 1991:51, 61–71) or for major actions, such as the purchase of a car or a bull (Duinmeijer 1997:178). Despite the extinction of the books, the *tonalpohualli* itself has remained a resilient and tenacious cultural system by which humans can understand and interact with the supernatural forces that govern their world. In those places where the 260-day count survives, it does so in the context of religious practice, and it remains inextricably tied to divinatory ideology.

Supernatural Truths for a Human Audience

It is ironic that the divinatory codices, which are quintessentially elite and highly esoteric products, were the books that had the broadest audience in preconquest Mexico. Exquisite and precious documents full of secret truths, they nonetheless have a certain egalitarian and classless flavor. Not only did they cross ethnic and linguistic borders, but they reached all levels of indigenous society, from the rulers in the palaces to the farmers in the fields and the porters carrying heavy loads along muddy footpaths. Their audience was all of humankind. Every human action and thought came under the forces they recorded.

Every Mesoamerican had his or her fate read shortly after birth and then throughout life. Parents rich and poor brought their newborns before the calendar priests in order to learn of their child's strengths, weaknesses, and proclivities. Prospective marriage partners hoped for favorable readings for their unions and sought good days for their ceremonies. Couples looked to the calendar priests to say whether they would bear children, how many, and of what sex. Pregnant mothers learned from the books if their birthing would

go well. Farmers of all kinds relied on the diviners' books to tell them when to plant and harvest. Long-distance merchants delayed their departure and arrival dates to wait for auspicious days, and locals arranged business transactions in tune with the fates. Rulers embarked on conquests and armies timed their battles according to auguries encoded in the almanacs.

Although the commoners, and most nobles, could not read the books themselves, they nevertheless participated in their use. The divinatory codices were some of the few manuscripts that most commoners ever saw. When people visited the calendar priest for a reading, they brought their payment for the diviner's services and offerings for the gods. They watched as the diviner brought out the books, and they heard the stiff pages crack as the books were opened and reopened to the various almanacs. They listened to or themselves uttered the long orations that accompanied divinations for major life events and activated the offerings they had brought. This process of divination brought humans into intimate contact with the ancient knowledge preserved in the books, through the mediation of the diviner.

So many of the other painted documents belonged outside the world of the commoners. History manuscripts and tribute lists, for example, belonged solely to the realm of the politically powerful. Painted, kept, and read in the palaces, the histories documented events pertinent to the ruling families and corporate polities, ignoring commoners altogether. Farmers, craft specialists, and other workers may never have seen the annals and genealogical histories. But ordinary people have their place in the divinatory codices; they are metaphorically washed away by the water goddess Chalchiuhtlicue, they suckle at the breast of Mayahuel, they are deceived by their spouses, and they plummet dead into the open mouth of the earth lord. They appear nameless as actors in some almanacs and are the unmarked (unannounced but understood) target for the actions of the supernaturals.

Those who owned and read the divinatory codices, the highly trained calendar priests and diviners, belonged to an indigenous elite. This elite status did not necessarily devolve from political power or wealth, however; it came with knowledge about the gods and cosmic forces. It grew through years of study at the *calmecac*. Some diviners clearly were attached to the

royal courts or great temple precincts, some even were born into royal households, and some achieved great renown. But others worked in the smaller communities, the neighborhoods, and the villages to bring knowledge of the spiritual forces to ordinary people.

Although the books were physically created by these human priests and sages, their content—their voice, as it were—belonged to the gods. The books were a means by which supernaturals communicated with humans. The paintings in the divinatory and religious manuscripts form a religious language that allows humans to interact with the intangible entities around them.⁸ The codices are directed to humankind: they speak from the supernatural world of the calendar and its mantic forces to the world of living beings. They indicate fates and tendencies by telling humans what forces are at work at a given time and revealing how these forces affect human actions. These books also instruct humans in the art of communicating with the gods and spirits through sacred speech and rituals.

This realm of time, space, and mantic forces was eternally present, existing prior to the paintings that identified and revealed its features. The painters and painters did not originate this information. They did not fashion the gods or establish their domains; they merely structured, recorded, and contained knowledge of the supernatural world, keeping and preserving it so that it could be readily accessed. It then became the diviner's office to receive, gather, and interpret the content of the divinatory and religious codices and to give it a human voice.

If we can see the divinatory paintings as a religious language, we can also see them as a scientific one. They served in ancient Mexico much as the graphic expressions of scientific thought do for us today. Like the various notational and modeling systems used in science—the charts, graphs, diagrams, and algebraic and other notational systems—they were intended to reveal the structure and functioning of the cosmos in all its complexities. Their purpose was to give form to that which is invisible, to depict and express what is fundamentally unrepresentable.⁹ In order to present truths, this pictorial language had to simplify, abstract, mark, label, and schematize the chaotic phenomena of the world into orderly graphic forms, which is what scientific notational systems do today. They both make successive abstractions from natural disorder and give

coherence to seemingly disparate or contradictory associations. Because the complexity of the ancient Mexican world required more than one pictorial strategy, various almanacs treated different phenomena and recorded different systems of correspondence.

Also like modern scientific and mathematical notation, the pictography in the divinatory books operates irrespective of the language spoken by its users. It transcends individual spoken languages. An image of the rain god might be variously named Tlaloc, Dzauui, or Cocijo in Nahuatl, Mixtec, or Zapotec, but its qualities are still revealed by its visual iconography and context. What Brian Rotman (1993:26) has said of mathematical signs can equally apply to the images in the books: their manner of functioning in divinatory discourse, the meaning they create, and the forms of signification they give rise to and facilitate are configured internally. The imagery operates not in terms of the language spoken by their users but through conformity to the presuppositions, rules, and protocols that govern this visual system. The pictography in the books of fate was its own culturally grounded discourse, its own graphic language, one that crossed ethnic, linguistic, and political borders.

Of all the objects that have survived from pre-conquest central Mexico, the divinatory codices connect us most fully to the minds of the ancient peoples, noble and commoner alike. The books allow us to know, if imperfectly, the gods who controlled that world, and they give us insights into the way the central Mexicans supplicated and managed these gods. In so doing, the books reveal to us the concerns of these people: the hopes for good rains, for easy childbirth, for happy and fecund marriages, for good days; and the anxieties over bad days and all the pitfalls and dangers of life. Through differently structured almanacs, the divinatory books explain the calendar in its multiple cycles that organized all actions, both mundane and sacred; most importantly, the almanacs reveal the supernatural forces that shaped everything that occurred or potentially could occur. The painted divinatory books show us how the Mexicans thought about time and the multiple meanings that adhered to time. They show us how knowledge of the world and cosmos was structured in order to make sense of a complex, messy, and often contradictory reality.

Appendix



Content Summaries

Manuscripts of the Aztec Tradition

Codex Borbonicus

1. 3–20: *Tonalpohualli* in *trecenas*, fully elaborated with *trecena* patrons, the 260 day dates (signs + coefficients), Night Lords, Day Lords, and Volatiles (Fig. 46, Plate 1). The first two pages are missing. Reads from left to right; on each page the days read from left to right, then from mid-page to top. (= Tonalamatl Aubin 3–20, which additionally has deity heads in the Volatiles' mouths; Telleriano-Remensis 8r–24r and Vaticanus A/Ríos 12v–37r, which lack Day Lords and Volatiles; = Borgia 61–70 and Vaticanus B 49–68 *trecena* patrons only; Volatiles also found in Borgia 71, Tudela 98v–99r; Night Lords also found in Borgia 14, Cospi 1–8, Fejérváry-Mayer 1, 2–4, Tudela 98v–124r, Vaticanus B 19b–23b)

2. 21–22: Fifty-two years (1 Rabbit–13 House) associated with the Night Lords of their year-bearer days, arranged as frames around two scenes: the first thirteen years around Cipactonal and Oxomoco (Fig. 7), the second thirteen years around Quetzalcoatl and Tezcatlipoca. Reads counterclockwise, beginning in lower left of each page.

Codex Telleriano-Remensis

1. 8r–24r: *Tonalpohualli* in *trecenas*, with *trecena* patrons, the 260 day dates (signs + coefficients), Night Lords (Fig. 48).

Each *trecena* spans facing verso-recto pages; reads from left to right. First verso page is missing. (= Vaticanus A/Ríos 12v–37r; = Borbonicus 3–20 and Tonalamatl Aubin 3–20 but without Day Lords and Volatiles; = Borgia 61–70 and Vaticanus B 49–68 *trecena* patrons only; Night Lords also found in Borgia 14, Cospi 1–8, Fejérváry-Mayer 1, 2–4, Tudela 98v–124r, Vaticanus B 19b–23b)

Tonalamatl Aubin

1. 3–20: *Tonalpohualli* in *trecenas*, fully elaborated with *trecena* patrons, the 260 day dates (signs + coefficients), the Night Lords, Day Lords, and Volatiles (with deity faces in their mouths) (Fig. 47). The first two pages are missing. Reads from right to left; on each page the days read from top to mid-page, then right to left. (= Borbonicus 3–20, which lacks deity heads in the Volatiles' mouths; Telleriano-Remensis 8r–24r and Vaticanus A/Ríos 12v–37r, which lack Day Lords and Volatiles; = Borgia 61–70 and Vaticanus B 49–68 *trecena* patrons only; Volatiles also found in Borgia 71; Night Lords also found in Borgia 14, Cospi 1–8, Fejérváry-Mayer 1, 2–4, Tudela 98v–124r, Vaticanus B 19b–23b)

Codex Tudela

1a. 97r–124r: *Tonalpohualli* presented in a single row (as a list), with the thirteen day signs of each *trecena* spanning the spread

of verso-recto pages, seven signs on the verso and six signs on the recto (Fig. 54, Plate 3). The *tonalpohualli* is divided into four groups of five *trecenas* (sixty-five days) according to the four directions; each group is associated with a cosmic tree and two supernaturals (Fig. 66). Night Lords given for each day sign; Volatiles given for the first thirteen. Reads from left to right. (Conceptually similar to Fejérváry-Mayer 1 in listing the *tonalpohualli* signs as a continuous line and associating the sequential blocks of sixty-five days to the four directions.) (Night Lords and Volatiles = Borbonicus 3–20, Tonalamatl Aubin 3–20. Volatiles = Borgia 71; Night Lords also found in Borgia 14, Cospi 1–8, Fejérváry-Mayer 1, 2–4, Telleriano-Remensis 8r–24r, Vaticanus A/Ríos 12v–37r, Vaticanus B 19b–23b)

1b. 90r–124r: Text and glosses that accompany the painted almanac through *trecena* 5 (p. 103r) name patron deities for the half-*trecenas* (= Lords of the Half Trecenas in Borgia 75–76, which is organized as a compressed table; Cervantes de Salazar [bk. 1, ch. 29] partially describes a similar almanac)

2. 125r: Corporeal almanac with twenty day signs displayed on and around a splayed deerskin (Fig. 60). Reads generally from side to side, bottom to top. (~ Borgia 53a, Vaticanus B 96, Vaticanus A/Ríos 54r, which have signs in different orders)

Codex Vaticanus A/Ríos

1. 11rv: Text incompletely describes a directional almanac organized as a compressed table with the twenty *trecenas* (*trecena* day signs and twelve spacers) associated with the four directions, with five signs for each direction. (= calendrics and general directional association of Borgia 49b–53b)

2. 12v–37r: *Tonalpohualli* in *trecenas*, with *trecena* patrons, the 260 day dates (signs + coefficients), Night Lords. Each *trecena* spans facing verso-recto pages; reads from left to right. (copy of Telleriano-Remensis 8r–24r; = Borbonicus 3–20 and Tonalamatl Aubin 3–20 but without Day Lords and Volatiles; = Borgia 61–70 and Vaticanus B 49–68, *trecena* patrons only; Night Lords also found in Borgia 14, Cospi 1–8, Fejérváry-Mayer 1, 2–4, Tudela 98v–124r, Vaticanus B 19b–23b)

3. 54r: Corporeal almanac with twenty day signs displayed around and attached to the organs of a human male body (Fig. 61). No sequential reading order. (conceptually related to the corporeal almanacs of Borgia 17b [Tezcatlipoca], Fejérváry-Mayer 44 [Tezcatlipoca], Laud 23 [Tlaloc], and the deerskin almanacs of Borgia 53a, Vaticanus B 96, Tudela 125r)

Manuscripts of the Borgia Group

Aubin No. 20

1. *Tonalpohualli* as a list organized as five sets of fifty-two days, each set identified by its beginning day date and fifty-one spacers, arranged as a frame around five directions (east, north, center, west, south) (Figs. 67, 68). The beginning dates are 5 Lizard, 5 Vulture, 5 Rabbit, 5 Flower, and 5 Grass. Each direction is represented by its Mixtec place sign (embellished with other imagery) and one of the five Cihuateteo and five Macuiltonaleque, who face each other and are accompanied by their calendrical names. Reads counterclockwise. (Cihuateteo and Macuiltonaleque = Borgia 47ab–48ab, Vaticanus B 77–79 in the same order; directional place signs appear in Porfirio Díaz Reverse 41, 33 left, Vienna 22–12)

Codex Borgia

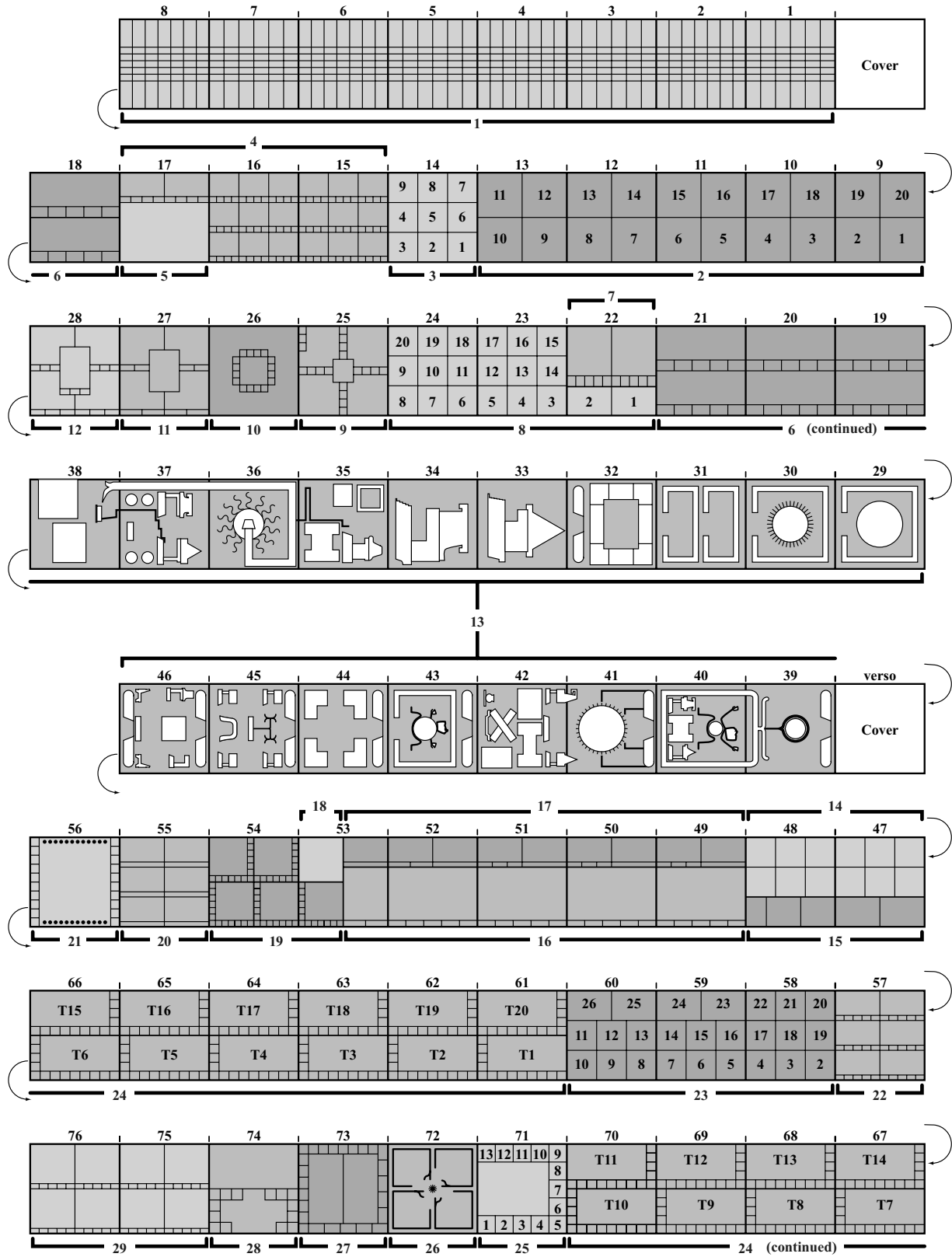
1. 1–8: *In extenso* almanac. *Tonalpohualli* signs arranged in five rows of fifty-two signs, with mantic scenes above and below (Figs. 39–41). The thirteen signs of a *trecena* span a two-page spread. Beginning with the fourth sign, Lizard, black footprints appear at intervals of 9×9 , 7×7 , 9×9 , 7×7 . Reads from right to left in each row beginning in the lower right. (= Cospi 1–8, Vaticanus B 1–8)

2. 9–13: Day sign patrons. Twenty day signs associated with their patrons and mantic scenes, organized as a list in two registers (Fig. 34). Reading order is from lower right to left, upper left to right. (= Vaticanus B 28–32, 87–94; ~ Borgia 22b–24, which has different gods and scenes)

3. 14: Night Lords associated with first nine day signs, as a list in three registers (Fig. 52). Reading order is boustrophedon: from lower right to left, middle left to right, upper right to left. (= Fejérváry-Mayer 2–4, Vaticanus B 19b–23b; Night Lords also found in Borbonicus 3–20, Cospi 1–8, Fejérváry-Mayer 1, Telleriano-Remensis 8r–24r, Vaticanus A/Ríos 12v–37r, Tonalamatl Aubin 3–20, Tudela 98v–124r)

4. 15–16–17a: Birth almanac, a series of four subalmanacs relating to birth, the presentation of the infant, cutting the umbilical cord, and nursing. For each topic, the twenty day signs are organized as a grouped list, associated with five supernaturals and scenes (four to a scene). Boustrophedon reading order is from lower right to left, middle left to right, upper right to left. (= Fejérváry-Mayer 23a–29a, Vaticanus B 33a–42a, both of which use spacers)

5. 17b: Corporeal almanac of twenty day signs around a striding Tezcatlipoca. No obvious reading order. (conceptually related to the corporeal almanacs on Laud 23 [Tlaloc], Fejérváry-Mayer 44 [Tezcatlipoca], and Vaticanus A/Ríos 54r)



Codex Borgia

[human], and the deerskin almanacs of Borgia 53a, Tudela 125r, Vaticanus B 96)

6. 18–21: *Tonalpohualli* organized as a compressed table, associated irregularly with eight scenes over two registers. Each cell has five signs + a varied number of spacers. The spacers are 6.6.6.6.6.6.4.4; the sets of days are thus 7.7.7.7.7.7.5.5. Although there does not seem to be a single topical theme, the scenes on the top and bottom registers are iconographically related. Reading order is from lower right to left, upper left to right. (~ Fejérváry-Mayer 26b–29b, which puts the scenes in a different order and clusters the days differently)

7. 22a: Deer of the east and north. Half of a *tonalpohualli* in *trecenas*, organized as a compressed table, with the *trecenas* of the east (1st, 5th, 9th, 13th, 17th) and north (2nd, 6th, 10th, 14th, 18th) associated with two deer. Each cell has five signs and twelve spacers. Seemingly the other half of Borgia 47ab–48ab, which associates the other *trecenas* (of the west and south) with the Cihuateteo and Macuiltonaleque. Reading order is from right to left. (= Vaticanus B 77 right)

8. 22b–23–24: Day sign patrons. Twenty day signs associated with their patrons or mantic scenes, organized as a list over three registers (Figs. 56–58). Reading order is from lower right to left, middle left to right, upper right to left. (~ Borgia 9–13, Vaticanus B 28–32, 87–94, which have different patrons and scenes)

9. 25: Twenty day signs organized diagrammatically as a broken list and associated with four deities; the signs begin in the middle with 10 Movement and read roughly counterclockwise, inside to outer. (= Vaticanus B 70, which begins with 11 Movement)

10. 26: Twenty day signs organized diagrammatically as an irregular list that frames a central skull; the signs on the sides of the frame are associated with the corpse bundles of four deities. Irregular reading order is counterclockwise.

11. 27: Rain almanac associating the four quarters of the *tonalpohualli* (represented by the dates for the first, sixth, eleventh, and sixteenth *trecenas* [1 Crocodile, 1 Death, 1 Vulture, 1 Monkey]) and the four quarters of the fifty-two-year cycle (represented by the years 1 Reed, 1 Flint, 1 House, and 1 Rabbit) with four different rain auguries (Fig. 87, Plate 8). Reads counterclockwise beginning in lower right. (= Vaticanus B 69; ~ Fejérváry-Mayer 1 in assigning the quarters of the *tonalpohualli* sequentially to the four directions)

12. 28: Rain almanac associating ten day dates (signs + coefficients) and five sequential years (1 Reed–5 Reed) to five rain auguries (Fig. 88). Years read counterclockwise, beginning in the lower right and ending at the center.

13a. 29–38: Narrative of creation, from the first explosion of energy through creation of the first human (Figs. 104–106, 108–109, 111–112, Plates 11, 12). Oriented 90° counterclockwise; reads from top to bottom.

13b. Reverse side 39–46: Narrative of creation continues (Figs. 114–119). Reads from top to bottom.

14. 47ab–48ab: The five Cihuateteo and five Macuiltonaleque associated with the *trecenas* of the west and south, organized as parallel grouped lists. The first, fifth, and last day signs of each *trecena* are given, with the rest replaced by spacers. The first signs in the west *trecenas* identify their respective Cihuateteo, and the fifth signs in the south *trecenas* identify their respective Macuiltonaleque. Introductory panels on the far right show the births of the Cihuateteo and Macuiltonaleque on the days prior to their names (e.g., 13 Death preceding [1] Deer; 4 House preceding [5] Lizard). Reads from right to left. (= Vaticanus B 77 left–79, which lacks the introductory panels; the same Cihuateteo and Macuiltonaleque pairs appear in Aubin No. 20)

15. 47c–48c: Five Tlazolteotl figures and scenes associated with five specific days (sign + coefficient). The Tlazolteotls have the same coloring as the Cihuateteo in the register above.

16. 49b–53b right: Directional almanac. *Tonalpohualli* in *trecenas* organized as a compressed table according to the four directions (Figs. 71–72, Plate 7). Each direction has five *trecena* signs and twelve spacers. An extra (smaller) fifth cell at the end signals the center. Each large directional cell has ten scenes or iconographic elements. Reads from right to left. (directional trees and some of the birds = Vaticanus B 17–18; directional trees ~ Fejérváry-Mayer 1; Cihuateteo and Macuiltonaleque = first four on Borgia 47ab–48ab and Vaticanus B 77 left–79 and are all present on Aubin No. 20; animal attacks = Fejérváry-Mayer 41a–42a, Vaticanus B 24–27, which have same calendrics; gods making offerings before temples = Cospi 12–13, Fejérváry-Mayer 33b–34b, which have same calendrics)

17. 49a–53a right: Night-sky bearers. Twenty day signs organized as an irregularly grouped list associated in nine cells with four pairs of deities (a night-sky bearer and a striding god with staff), plus a ninth figure falling into darkness (Fig. 75). Reads from right to left, but the first sign with each pair appears in the night-sky band; the count begins with Grass. (= Vaticanus B 19a–22a)

18. 53a left: Corporeal almanac of twenty day signs arranged over a deer skin (Fig. 44). Reading order begins at the lower right and generally proceeds back and forth, from bottom to top. (= Vaticanus B 96; ~ Tudela 125r, which has signs in a different order; conceptually related to corporeal almanacs)

nacs on Borgia 17b [Tezcatlipoca], Laud 23 [Tlaloc], Vaticanus A/Ríos 54r [human])

19. 53b left–54: Venus almanac. *Tonalpohualli* organized as a compressed table of five cells that picture Tlahuizcalpantecuhtli spearing different images. It requires thirteen passes through five periods of four days each. Each cell has thirteen day dates, identified by one day sign (Crocodile, Serpent, Water, Reed, Movement, respectively) and the coefficients 1–13. The three extra day signs that appear in the cells function as spacers. (= Vaticanus B 80–84; = Cospi 9–11, which is abbreviated; ~ Venus almanac in Dresden 46–50, which has spearing scenes but differs calendrically)

20. 55: Travel almanac. Twenty day signs organized as a grouped list irregularly associated with six travelers, in three registers (Fig. 37). Reads from lower right to left, middle left to right, upper right to left. (= Fejérváry-Mayer 30a–32a, which uses some spacers; ~ Fejérváry-Mayer 35a–37a; ~ calendrically to Fejérváry-Mayer 38a–40a)

21. 56: Corporeal almanac. *Tonalpohualli* in *trecenas* associated with a double figure of Quetzalcoatl/Mictlantecuhtli. Ten *trecena* signs are in a column on each side; twelve spacers are at top and bottom. Reading order moves from lower right to lower left, and back and forth up the columns. (= Vaticanus B 76; ~ Borgia 73 and Vaticanus B 75, where the double figure of Quetzalcoatl/Mictlantecuhtli is associated with forty-six or forty signs)

22. 57: Marriage almanac. *Tonalpohualli* organized as a compressed table associated with six scenes of couples, with five day signs and an irregular number of spacers per scene (Fig. 79). The spacers are 7.7.7.7.10.8, which makes the sets of days 8.8.8.8.11.9. Reads from lower right to left, middle left to right, upper right to left. (= Fejérváry-Mayer 35b–37b)

23. 58–60: Marriage almanac. Numbers 2–26 associated with twenty-five couples, arranged as a list of three registers. Reads from lower right to left, middle left to right, upper right to left. (= Laud 33–38, Vaticanus B 42b–33b)

24. 61–70: *Tonalpohualli* in *trecenas*, presenting all 260 day signs in association with the twenty *trecena* patrons (Fig. 49). Reads over two registers, from lower right to left, upper left to right. Around each *trecena* panel the thirteen day signs run along the bottom and up the far side. (= Vaticanus B 49–68; = but has fewer features than Borbonicus 3–20, Tonalamatl Aubin 3–20, Telleriano-Remensis 8r–24r, Vaticanus A/Ríos 12v–37r)

25. 71: Thirteen Volatiles associated with the thirteen day coefficients, arranged as a list around the enthroned sun (Fig. 55, Plate 4). (same Volatiles as Borbonicus 3–20, Tonalamatl Aubin 3–20, Tudela 98v–99r)

26. 72: Four serpents. *Tonalpohualli* in *trecenas* as a compressed table associated diagrammatically with four gods and serpents, with five *trecenas* per deity (Fig. 63). The day signs appear around the deities; the twelve spacers appear as disks within the serpents' bodies. Reads counterclockwise. (~ Vaticanus B 73, where the first four day signs are associated with four serpents in the same spatial configuration, but the gods are lacking and the serpents only have eleven disks)

27. 73: Corporeal/diagrammatic almanac. Forty-six day signs arranged over the double figure of Quetzalcoatl/Mictlantecuhtli and in a frame around them. Twenty signs are on the bodies, twenty-five are in the frame, and the twenty-sixth (Death) is in the lower left corner. Days on the bodies have no obvious reading order; those in the frame read counterclockwise. (= Vaticanus B 75, which only has forty day signs, fifteen on the bodies and twenty-five in the frame; ~ Borgia 56, Vaticanus B 76, which have different calendrics)

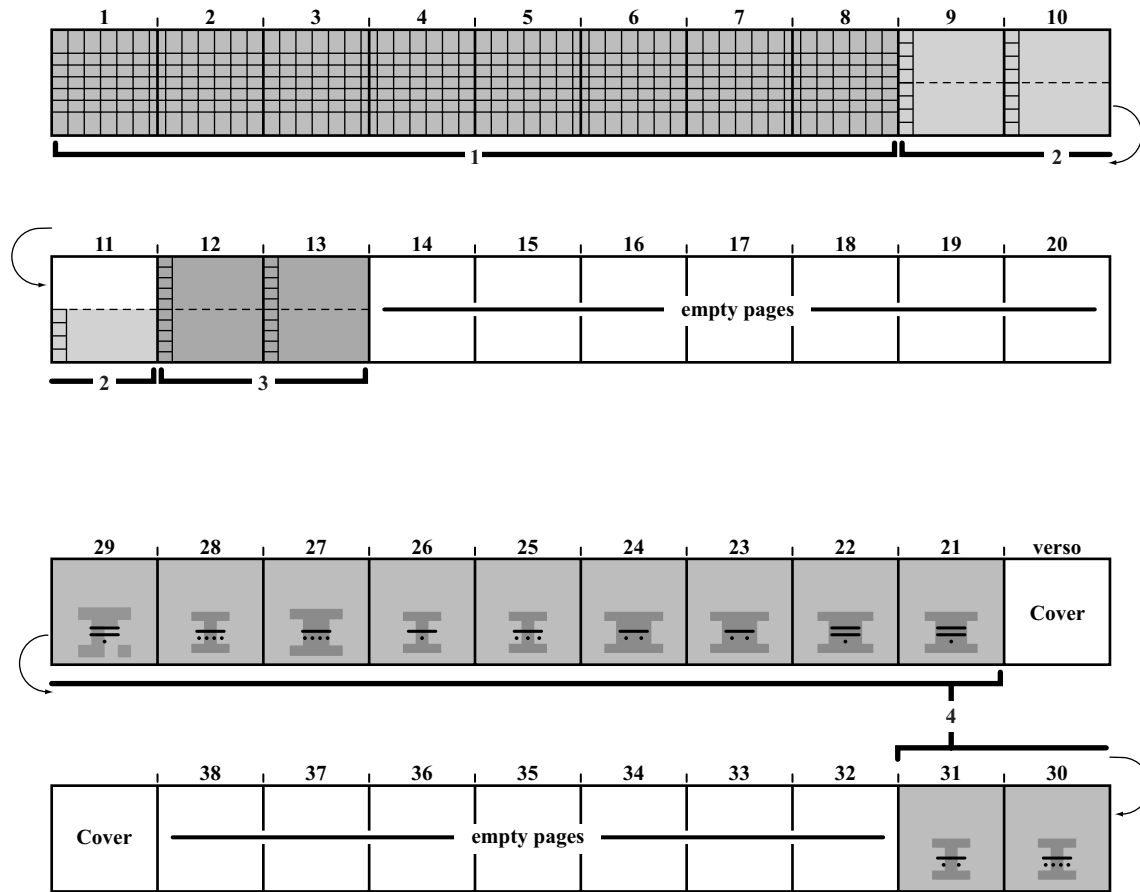
28. 74: Corporeal/diagrammatic almanac. Forty day signs: twenty arranged around and on Tlazolteotl in a temple (top register), and twenty arranged around and on a blue male in a destroyed temple (bottom register). Irregular reading orders. (= Vaticanus B 74)

29. 75–76: Lords of the Half-*Trecenas*. *Tonalpohualli* in half-*trecenas* (of seven- and six-day sets), associated with eight scenes of deities receiving blood from auto-sacrifice (Fig. 76). Organized as a compressed table, with each mantic cell having five day signs and an irregular number of spacers: 6.5.6.5.6.5.6.5. The sets of days are thus 7.6.7.6.7.6.7.6. In two registers, reads from lower right to left, upper left to right. (= textual description of almanac in Tudela 90r–103r and Cervantes de Salazar [bk. 1, ch. 29:143–144]; ~ Porfirio Díaz Reverse 42, which lacks spacers, has the gods seated under trees or shelters, and is missing four cells because of a lost page; ~ Laud 9–16, which has the gods seated under trees or shelters and divides the *trecenas* into segments of eight and five days)

Codex Cospi

1. 1–8: *In extenso* almanac. *Tonalpohualli* signs arranged in five rows of fifty-two signs, with mantic scenes above and below. The thirteen signs of a *trecena* span a two-page spread. Night Lords are assigned to all the signs. Beginning with the fourth sign, Lizard, black footprints also appear at intervals of 9×9 , 7×7 , 9×9 , 7×7 . Reads from left to right, beginning in the lower left. (= Borgia 1–8, Vaticanus B 1–8; Night Lords also found in Borbonicus 3–20, Borgia 14, Fejérváry-Mayer 1, 2–4, Telleriano-Remensis 8r–24r, Tonalamatl Aubin 3–20, Tudela 98v–124r, Vaticanus A/Ríos 12v–37r, Vaticanus B 19b–23b)

2. 9–11: Venus almanac. Twenty day dates (sign + coefficient) associated with five scenes of Tlahuizcalpantecuhtli spearing



Codex Cospi

different figures, arranged as a grouped list (Fig. 91, Plate 9). The boustrophedon reading order is from bottom to top, top to bottom, and bottom to top, beginning in the lower left. The day signs are accompanied by day coefficients in sequence, except that the first sign in each group of four has the coefficient 1, which signals successive Venus years (e.g., 1 Crocodile, 1 Serpent, 1 Water, 1 Reed, 1 Movement). (= Borgia 53b left–54, Vaticanus B 80–84, which have more complete calendrics)

3. 12–13: Temple offerings. *Tonalpohualli* in *trecenas* as a compressed table, associated with four gods who make offerings in front of temples. Each scene has five *trecena* signs, but the twelve spacers are lacking. Irregular reading order begins on p. 12 with the lowest sign next to the top scene (Crocodile) to the lowest sign next to the bottom scene (Jaguar), and then on p. 13 to the lowest sign next to the bottom scene (Deer) to the lowest sign next to the top scene (Flower), and so forth. (= Fejérváry-Mayer 33b–34b, offering scenes and calendrics of Borgia 49b–53b)

4. Reverse side. 21–31: Protocols for rituals, one to a page, involving counted offerings (Fig. 94). The gods are pictured and named calendrically at the top; below are quantities of offerings laid out in an I-shaped pattern; in columns on the right and/or left are other elements associated with the rituals.

21–24: Rituals probably for protection against stinging animals.

25–26: Agricultural or weaving rituals involving Xochiquetzal.

27–31: Hunting rituals.

Codex Fejérváry-Mayer

1. 1: *Tonalpohualli* in *trecenas* organized as a list that is shaped into a formée cross (Fig. 65, Plate 6). Each arm of the cross pertains to a cardinal direction, with adjacent intercardinal loops. The *trecenas* are sequentially designated by their signs followed by twelve spacers, in a continuous counterclockwise order. Each direction is characterized by a directional tree and

bird, an offering platform/surface, and a pair of facing deities. Together with Xiuhtecuhtli in the center, the four pairs of gods are the nine Night Lords, although not in the usual order. Next to the intercardinal loops are the *trecena* days organized as they would be in a compressed table. (~ Madrid 75–76; ~ calendrically to Borgia 27, Vaticanus B 69, and Tudela text 97–124r in that it assigns the *trecenas* sequentially to the four directions; different directional birds and trees found in Borgia 49b–53b right, Vaticanus B 17–18; Night Lords also found in Borbonicus 3–20, Borgia 14, Cospi 1–8, Fejérváry-Mayer 2–4, Telleriano-Remensis 8r–24r, Tonalamatl Aubin 3–20, Tudela 98v–124r, Vaticanus A/Ríos 12v–37r, Vaticanus B 19b–23b)

2. 2–4: Night Lords and mantic scenes associated with the first nine day signs, as a list (Figs. 53, 92). Reads from right to left. (= Borgia 14, Vaticanus B 19b–23b; Night Lords also found in Borbonicus 3–20, Cospi 1–8, Fejérváry-Mayer 1,

Telleriano-Remensis 8r–24r, Tonalamatl Aubin 3–20, Tudela 98v–124r, Vaticanus A/Ríos 12v–37r)

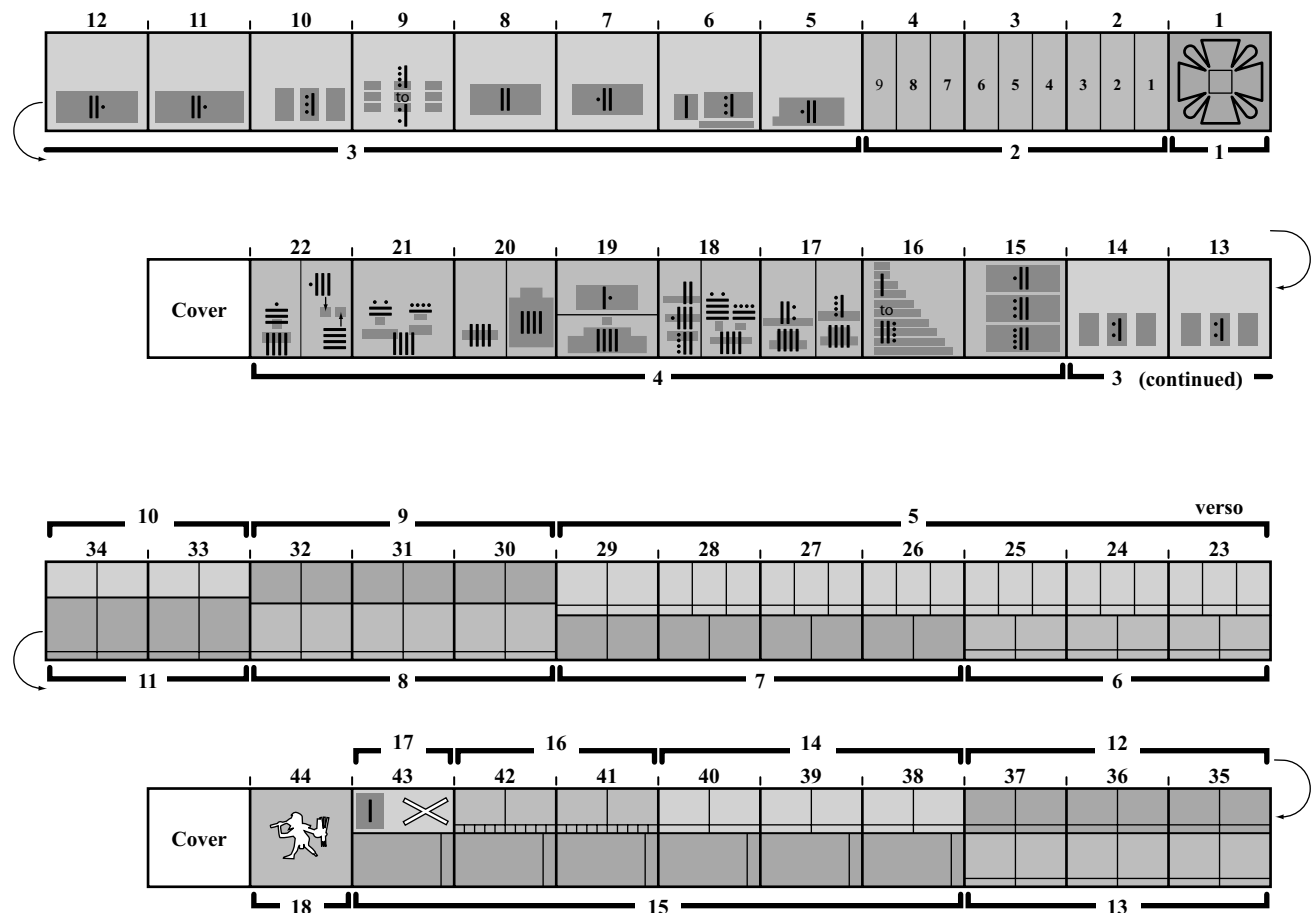
3. 5–14: Protocols for rituals involving counted offerings, with deities seated on stools facing offerings of kindling, a ball of rubber, and other elements (Fig. 97).

4. 15–21: Protocols for other rituals involving counted offerings (Fig. 98).

5. Reverse side 23a–29a: Birth almanac. A series of four sub-almanacs relating to birth, the presentation of the infant, cutting the umbilical cord, and nursing (Fig. 84). For each, the twenty day signs are organized as a grouped list, associated with five supernaturals and scenes (four to a scene). Spacers replace three of the days associated with each scene. Reads from right to left. (= Vaticanus B 33a–42a, Borgia 15–16–17a)

6. 23b–25b: Forty days organized as a grouped list, associated with five of six pairs of figures in six cells. There are eight days

Codex Fejérváry-Mayer



per pair for the first five cells, with some signs replaced by spacers, but no days for the last pair in the last cell. Reads from right to left. (= Vaticanus B 9a–11a, which has irregular calendrics; = Porfirio Díaz Reverse 39–35, which has only the first five pairs)

7. 26b–29b: *Tonalpohualli* organized as a compressed table associated irregularly with eight scenes of varied subjects. Only five day signs are pictured: Crocodile with the first cell; Reed, Movement, Serpent, and Water with the second cell (they represent *trecenas* often associated with the east). All the other days are signaled by spacers: 0.6.5.6.9.8.10.7. The count proceeds from the first sign, Crocodile, through the fifty-one spacers, after which it continues with Reed in the second cell, and so forth. Reads from right to left. (~ Borgia 18–21, which has similar scenes in a different order and different calendrics)

8. 30b–32b: Eighty days organized as a grouped list, associated with six deities in five temples and a pole-and-beam construction. Count begins with Grass, reads from right to left. Each cell begins with a sign followed by spacers, which number 7.10.9.12.13.23; the sets of days are thus 8.11.10.13.14.24. (= Vaticanus B 9b–11b, which totals seventy-six days spaced differently among the cells)

9. 30a–32a: Travel almanac. Twenty days organized as a grouped list and irregularly associated with six walking figures in six cells (Fig. 38). Spacers replace signs in most of the cells. Reads from right to left. (= Borgia 55, which has all the day signs pictured; ~ calendrically and topically to Fejérváry-Mayer 35a–37a, 38a–40a)

10. 33a–34a: Maize plant almanac. Twenty days organized as a grouped list, associated with four scenes of anthropomorphized maize plants (Fig. 86, Plate 2). There are five days to a scene (a sign followed by four spacers). Day signs begin with Movement (underneath the seated water goddess). Reads from right to left.

11. 33b–34b: Temple offerings. *Tonalpohualli* in *trecenas* organized as a compressed table, associated with four scenes of gods making offerings before temples (Fig. 42, Plate 2). Each scene has five *trecena* signs and twelve spacers. Reads from right to left. (= Cospi 12–13, which lacks spacers; = calendrics and temple scenes of Borgia 49b–53b)

12. 35a–37a: Travel almanac. Twenty day signs organized as a grouped list and irregularly associated with six walking figures in six cells. All twenty day signs are pictured. Reads from right to left. (= calendrical arrangement and ~ scenes on Fejérváry-Mayer 38a–40a; ~ walking figures on Borgia 55 and Fejérváry-Mayer 30a–32a, which have the days assigned differently)

13. 35b–37b: Marriage almanac. *Tonalpohualli* organized as a compressed table, associated with six scenes of couples, with five day signs and an irregular number of spacers per scene. The spacers are 7.7.7.7.10.8, which makes the sets of days 8.8.8.8.11.9. Reads from right to left. (= Borgia 57)

14. 38a–40a: Travel almanac. Twenty day signs organized as a grouped list, irregularly associated with six scenes (Fig. 85). Most of the scenes involve travelers. All the day signs are pictured, assigned to the cells in sets of 3.2.4.5.4.2. Reads from right to left. (= calendrical arrangement and ~ scenes on Fejérváry-Mayer 35a–37a; ~ calendrically and topically to Borgia 55, Fejérváry-Mayer 30a–32a)

15. 38b–43b: Opossum almanac. *Tonalpohualli* organized as a compressed table, irregularly associated with six scenes involving opossums. Each cell has five day signs and spacers, which are 7.3.9.3.16.8; the sets of days are thus 8.4.10.4.17.9. Reads from right to left.

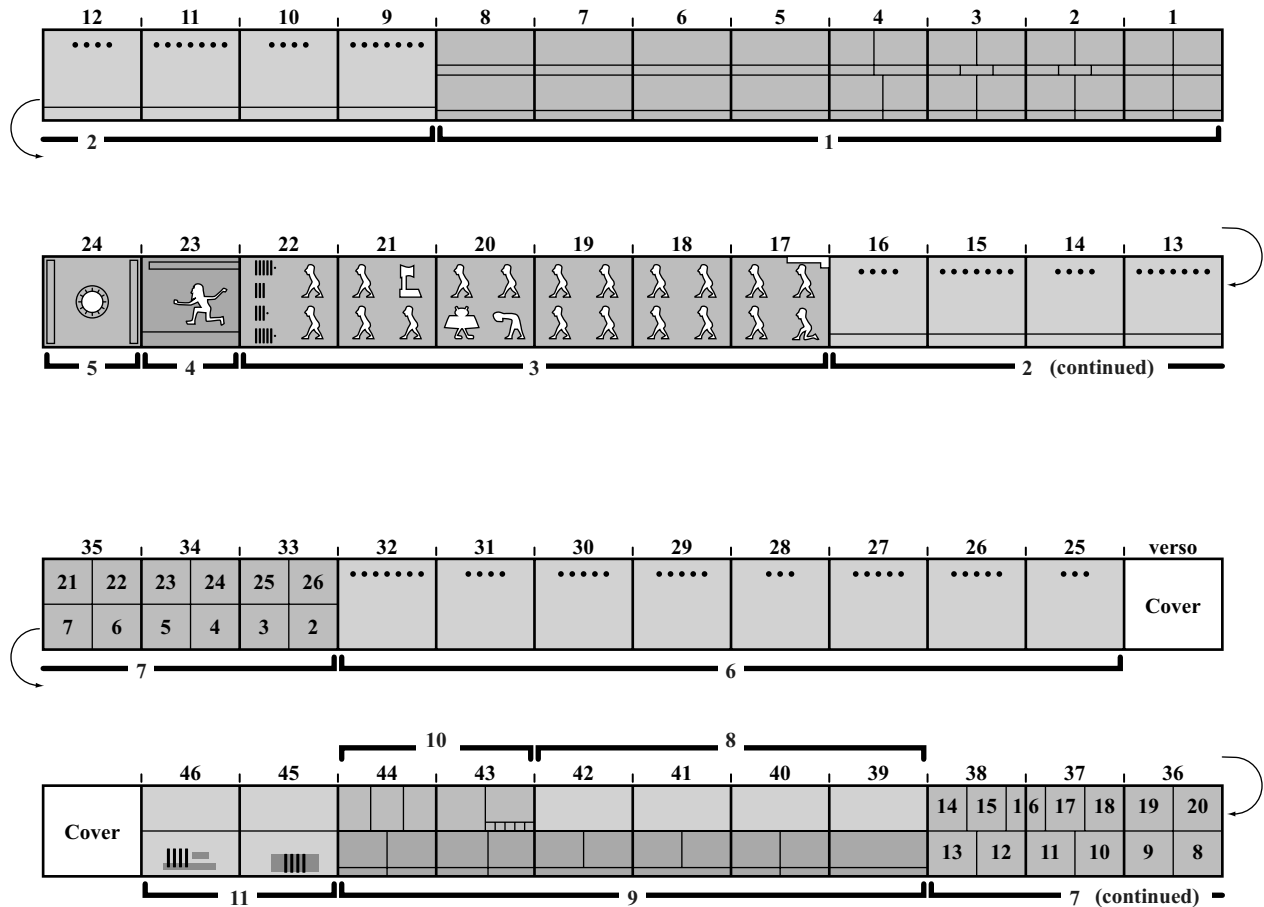
16. 41a–42a: Animal attacks. *Tonalpohualli* in *trecenas* organized as a compressed table, associated with four scenes of animal combat or attack (Fig. 74). Each scene has five *trecena* signs and twelve spacers. Reads from right to left. (= Vaticanus B 24–27; = calendrics and animal attack scenes of Borgia 49b–53b)

17. 43a: Protocol for ritual with counted bundles. Bundle offering involving the day 1 Serpent, as well as the days 1 Crocodile, 1 Wind, 1 Death, and 1 Movement placed at the ends of a crossroads.

18. 44: Corporeal almanac. *Tonalpohualli* in *trecenas*, with the *trecenas* represented by their day signs and twelve spacers, placed around the body of a striding Tezcatlipoca. The reading order is counterclockwise in roughly three spatial areas: lower left, right, and upper. The count moves from a *trecena* in the lower left, to a *trecena* in the right, to a *trecena* in the upper, and so forth. (conceptually related to the corporeal almanacs on Borgia 17 [Tezcatlipoca], Laud 23 [Tlaloc], and Vaticanus A/Ríos 54r [human], and the deerskin almanacs on Borgia 55a left, Tudela 125r, Vaticanus B 96, all of which involve day signs instead of *trecena* signs)

Codex Laud

1. 1–8: Almanac of forty day signs associated with thirty-two figures, arranged as a grouped list over two registers. The topic is related to war and sacrifice. Reed glyphs appear in the cells with many figures, where they signify arrows or darts rather than the day sign Reed. The count reads from right to left along the bottom register, beginning with Grass in the lower right corner, then returns left–right along the top register to Death in the upper right; five spacers in the lower right



Codex Laud

cell then return the count to Grass. Although the day signs in the upper register sequentially read from left to right, the individual signs (except Water) face left (the direction the figures face).

2. 9–16: Lords of the Half-*Trecenas*. *Tonalpohualli* organized as a compressed table, irregularly associated with eight deities seated under trees or shelters (Fig. 77, Plate 10). Each cell has five day signs plus spacers; the spacers are 7.4.7.4.7.4.7.4. The sets of days are thus 8.5.8.5.8.5.8.5, which means that the sets of facing pages compose *trecenas*. Reads from right to left. (= iconography Porfirio Díaz Reverse 42, which associates fifty-two sequent day signs [four *trecenas*] with the deities as a grouped list, divides them into sets of 7.6 rather than 8.5, and lacks four cells because of a lost page; ~ calendrically to Borgia 75–76, which also divides the *trecenas* into sets of 7.6 rather than 8.5 and has different iconography)

3. 17–22: Protocol for ritual involving counted offerings, which includes twenty-two active figures, most of whom are

walking right to left toward the location of the counted items on the far left (Fig. 100). Days associated with the figures are 1 Crocodile (p. 19) and 3 or 4 Water (p. 20); days drawn but uncolored on p. 22 next to the counted bundles are 9 Reed, 8 Reed, 5 Flower, and 2 Reed.

4. 23: Corporeal rain almanac. Twenty day signs arranged around a striding Tlaloc. There is no obvious sequence to the reading order. (conceptually related to the corporeal almanac on Borgia 17b [Tezcatlipoca], Fejérváry-Mayer 44 [Tezcatlipoca], and Vaticanus A/Ríos 54r [human], and the deerskin almanacs on Borgia 53a left, Vaticanus B 96, Tudela 125r)

5. 24: Eclipse almanac? The sun god seated in a sun disk surrounded by blood is being covered by a dark flow from the death god's mouth; eight other gods flank the sides. Near the corners are four day signs (Crocodile, Death, Monkey, Vulture), each with twenty-five spacers to represent double *trecenas*. As *trecena* signs, Crocodile, Death, Monkey, and Vulture divide the *tonalpohualli* into quarters.

6. Reverse side 25–32: Death almanac. Count of 360 days organized as a compressed table, irregularly associated with eight scenes involving skeletal figures. Reads from right to left. Each of the eight cells has five day signs and spacers, which are 3.5.5.3.5.5.4.7; the sets of days are thus 4.6.6.4.6.6.5.8 (totaling forty-five days for each pass through the almanac). To reach the repeatable cycle of 360 days, the reader passes through the almanac eight times. The first five passes begin respectively with the day signs in the first cell: Crocodile, Death, Monkey, Vulture, and Crocodile. After the count has completely passed through the almanac once (for 225 days), it continues again with Death, Monkey, and Vulture in the first cell. After this, the almanac is fully completed and can recycle with Crocodile again in the first cell. This is the only 360-day almanac in the Borgia Group.

7. 33–38: Marriage almanac. Numbers 2–26 associated with twenty-five couples, arranged as a list of two registers (Figs. 80–82). Reads from lower right to left, upper left to right. (= Borgia 58–60, Vaticanus B 42b–33b)

8. 39a–42a: *Tonalpohualli* in *trecenas* organized as a compressed table, associated with four figures and rituals of Tlazolteotl. Each cell has five day signs and twelve spacers. Reads from right to left.

9. 39b–44b: Forty day signs organized as a grouped list, irregularly associated with eleven scenes of ritual. The only common feature of the rituals is that they all involve tied bundles of kindling and reeds. The day signs are all pictured; they are assigned to the cells in groups of 6.4.3.7 (spanning two cells).6 (spanning two cells).4.4.3.3. Reads from right to left.

10. 43a–44a: *Tonalpohualli* organized as a compressed table, irregularly associated with five scenes of diverse nature, perhaps funeral. The first cell has five day signs plus spacers, but the subsequent cells picture only one day sign (the sign for the first pass through the almanac) with the spacers. The count begins with Jaguar, and the spacers are 9.9.12.11.6; the sets of days are thus 10.10.13.12.7. Reads from right to left.

11. 45–46: Protocols for rituals involving counted offerings, featuring women offering liquids (blood and water), and the day dates 1 Dog, 8 Deer, and 1 Water (p. 45), and 1 Water and 8 Water (p. 46) (Fig. 99).

Codex Porfirio Díaz Reverse

1. 42: Lords of the Half-*Trecenas*. Originally fifty-two day signs (four *trecenas*) organized as a grouped list and associated with eight deities seated under trees or shelters (Fig. 78). Day signs are irregularly assigned in sets of 7.6.7.6.7.6.7.6, which

means that the day signs of adjacent deities compose *trecenas*. Now missing one page, which had the first two and last two deities and their day signs. Reads from lower right to left, upper left to right, with the day signs reading clockwise in an “L” around each deity. (= iconography of Laud, which has the *tonalpohualli* divided into half-*trecenas* as a compressed table with sets of days of 8.5.8.5.8.5.8.5; ~ to Borgia 75–76, which also has the *tonalpohualli* divided into half-*trecenas* as a compressed table with sets of days of 7.6.7.6.7.6.7.6, and different iconography)

2. 41: Directional almanac, or protocol of ritual involving offerings of rubber balls and bundles of kindling to gods associated with the four directions. Five to seven specific day dates assigned to each. No obvious reading order. (= directional place signs of Porfirio Díaz Reverse 33a, Aubin No. 20)

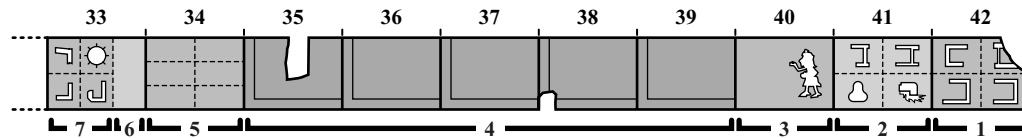
3. 40: Corporeal/diagrammatic almanac related to nursing. Twenty day signs placed around a nursing woman, with a seated couple below. Irregular reading order begins in the upper right and goes clockwise around the central figure for six signs; then beginning with Deer it runs from bottom to top in two columns on the right and left sides. (vaguely ~ reading pattern as Borgia 74, Vaticanus B 74, which have different iconography)

4. 39–35: Forty day signs organized as a grouped list, associated with five pairs of facing deities, with eight signs per pair. Reads from right to left; for last three pairs, the signs wrap partially around the pairs in an “L.” (= Fejérváry-Mayer 23b–25b, Vaticanus B 9a–11a, which use spacers to replace some day signs and have a sixth pair to which no day signs are assigned; Vaticanus B 9a–11a assigns the days irregularly; paired deities [but different ones] are also featured in *tonalpohualli* presentations on Borgia 57, Fejérváry-Mayer 35b–37b)

5. 34: Twenty-six days associated irregularly with six scenes of sacrifice, organized as a grouped list over three registers. Next to each scene is a day sign followed by different quantities of spacers; the spacers are 2.6.3.6.2.1, making sets of days of 3.7.4.7.3.2. The count begins with Jaguar in the lower right. Reads from lower right to left, middle left to right, upper right to left, ending with the spacer for Rain in the upper left.

6. 33 right: Almanac painted sideways on the page. Twenty days beginning with 5 Serpent associated with four figures or scenes of diverse nature, with five days per scene. For each scene the first day sign is pictured along with four spacers. Reads from right to left.

7. 33 left: Directional almanac, painted sideways on the page. Twenty day signs associated with lords and place signs of the four directions, organized as an irregular grouped list, with five signs per direction (Fig. 69). Reads counterclockwise, be-



Codex Porfirio Díaz Reverse

ginning in the middle left edge with Crocodile; every fifth sign is located within the center of the subsequent directional place sign. (= directional place signs of Porfirio Díaz 41, Aubin No. 20)

Codex Vaticanus B

1. 1–8: *In extenso* almanac. *Tonalpohualli* signs arranged in five rows of fifty-two signs, with mantic scenes above and below. The thirteen signs of a *trecena* span a two-page spread. Reads from left to right in each row, beginning in the lower left. (= Borgia 1–8, Cospi 1–8)

2. 9a–11a: Forty days organized as a grouped list, associated with five of six pairs of figures in six cells. Signs are irregularly assigned, and some are replaced by spacers; no signs are associated with the last pair. (= Fejérváry-Mayer 23b–25b, Porfirio Díaz Reverse 39–35, which have day signs regularly assigned eight to a pair; Porfirio Díaz Reverse lacks the sixth pair)

3. 9b–11b: Seventy-six days organized as a grouped list, associated irregularly with six deities in five temples and a pole-and-beam construction. Count begins with Grass; day signs are irregularly assigned to the cells in sets of 9.9.11.13.14.20; spacers replace most day signs. Reads from left to right. (= Fejérváry-Mayer 30b–32b, which has eighty days differently spaced)

4. 12: Almanac for digging. Twenty-six days organized as a grouped list, associated with three gods digging with digging sticks. All the day signs but the fifteenth one, Eagle, are replaced by spacers. The count is presumed to begin with Crocodile (replaced by a spacer) in the lower left corner and to read generally clockwise.

5. 13–14: Thirty-two day signs arranged as an encircling list in and around two temples, one a night/death temple with an owl inside (p. 13) and one a day/preciousness temple with a turkey inside (p. 14). All the day signs are given. The first sixteen pertain to the owl temple, and the second sixteen to the turkey temple. Reading order is generally counterclockwise, beginning on p. 13 with the first sign (Crocodile) in the lower left of the outer frame, moving to the next four signs within the temple, then back to the sixth sign (Death) in the

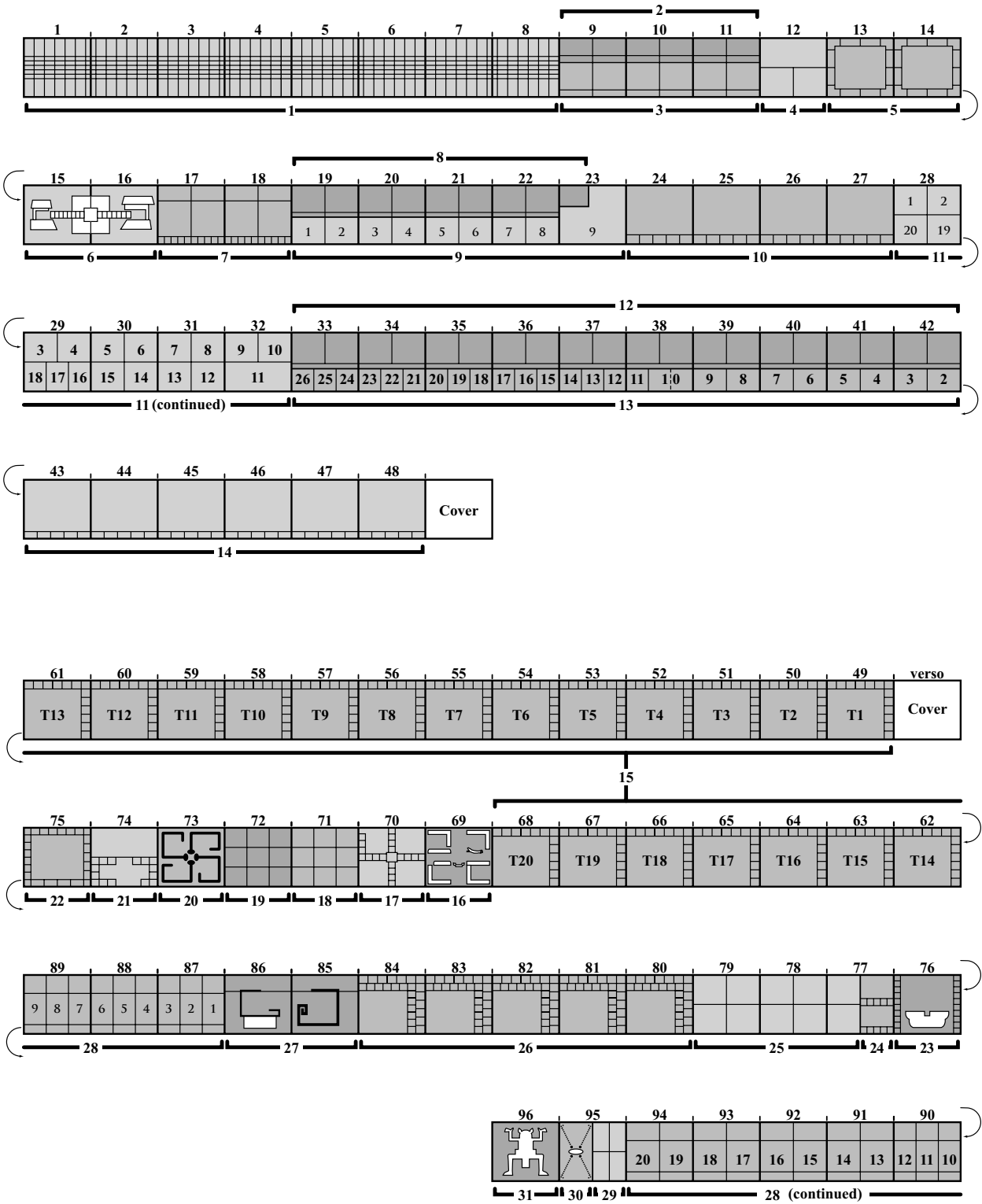
lower frame, and counterclockwise around the frame to Vulture; the next set of signs, on p. 14, begins sequentially with Movement and follows the same pattern.

6. 15–16: Thirty-one day signs (in a broken sequence) arranged between and in the same two temples featured on pp. 13–14, one a night/death temple with an owl inside (p. 15) and one a day/precious temple with a turkey inside (p. 16). All the day signs are given. The complex sequence of the signs begins with Crocodile in the central square at the fold between the pages, moves counterclockwise around the larger square for the next four signs, runs right to left along the row toward the death temple (6th through 12th signs) and then counterclockwise within the temple (the 13th through 18th signs); the sequence resumes just right of center with the twelfth sign (Grass) and runs left right along the row toward the precious temple (12th through 18th signs) and then clockwise within that temple (19th through 4th signs).

7. 17–18: Directional almanac. *Tonalpohualli* in *trecenas* organized as a compressed table according to four gods and cosmic trees with their birds, with five *trecenas* to each directional tree (Fig. 73). The twelve spacers are located on and around the trees in each cell. Reads from left to right. (= calendrics, directional trees, and some of the birds of Borgia 49b–53b right; directional trees and birds also appear on Fejérváry-Mayer 1 with different calendrics)

8. 19a–23a: Night-sky bearers. Twenty day signs organized as an irregularly grouped list associated in nine cells with four pairs of deities (a night-sky bearer and a striding god with staff), plus a ninth figure falling into darkness; this last cell intrudes into the almanac on the upper left of p. 23. Reads from left to right, but the first sign in each pair appears in the night-sky band; the count begins with Grass. (= Borgia 49a–53a right)

9. 19b–23b: Night Lords associated with the first nine day signs, as a list. Reads from left to right. Last cell expands to fill most of p. 23. (= Borgia 14, Fejérváry-Mayer 2–4, Vaticanus B 19b–23b; Night Lords also found in Borbonicus 3–20, Cospi 1–8, Fejérváry-Mayer 1, Telleriano-Remensis 8r–24r, Tonalamatl Aubin 3–20, Tudela 98v–124r, Vaticanus A/Ríos 12v–37r)



10. 24–27: Animal attacks. *Tonalpohualli* in *trecenas* organized as a compressed table, associated with four scenes of animal combat or attack (Fig. 74). Each scene has five *trecena* signs and twelve spacers. Reads from left to right. (= Fejérváry-Mayer 41a–42a; = calendrics and animal attack scenes of Borgia 49b–53b)

11. 28–32: Day sign patrons. Twenty day signs associated with their patrons and mantic scenes, organized as a list in two registers (Figs. 57, 58). Reading order is from upper left to right, lower right to left. (= Borgia 9–13, Vaticanus B 87–94; ~ Borgia 22b–23–24, which has different gods and scenes)

12. 33a–42a: Birth almanac: a series of four subalmanacs relating to birth, the presentation of the infant, cutting the umbilical cord, and nursing. For each topic, twenty days are organized as a grouped list, associated with five supernaturals and scenes (four to a scene). Spacers replace three of the days associated with each scene. Reading order is from left to right. (= Borgia 15–16–17a, Fejérváry-Mayer 23a–29a)

13. 42b–33b: Marriage almanac. Numbers 2–26 associated with twenty-five couples, arranged as a list (Figs. 80–82). Reads right to left, the reverse of the rest of the manuscript. (= Borgia 58–60, Laud 33–38)

14. 43–48: Rain almanac. *Tonalpohualli* organized as a compressed table, irregularly associated with six rain gods. There are five day signs per cell plus the spacers 7.3.11.3.14.8, yielding sets of days 8.4.12.4.15.9. Reads from left to right.

15. Reverse side 49–68: *Tonalpohualli* in *trecenas*, presenting all 260 day signs in association with the twenty *trecena* patrons (Fig. 50). Reads from right to left. Around the *trecena* panels the thirteen signs run up the right side and along the top. (= Borgia 61–70; = but has fewer features than Borbonicus 3–20, Tonalamatl Aubin 3–20, Telleriano-Remensis 8r–24r, Vaticanus A/Ríos 12v–37r)

16. 69: Rain almanac associating the four quarters of the *tonalpohualli* (represented by the day dates for the first, sixth, eleventh, and sixteenth *trecenas* [1 Crocodile, 1 Death, 1 Vulture, 1 Monkey]) and the four quarters of the 52-year cycle (represented by the year dates 1 Reed, 1 Flint, 1 House, and 1 Rabbit) with four different rain auguries. Reads counterclockwise, beginning in the upper right. (= Borgia 27, which designates the years by AO signs; conceptually ~ Fejérváry-Mayer 1 in assigning the quarters of the *tonalpohualli* sequentially to the four directions)

17. 70: Twenty day signs organized diagrammatically as a broken list and associated with four deities; the signs begin in the middle with 11 Movement and read roughly counterclockwise, inside to outside. (= Borgia 25, which begins with 10 Movement)

18. 71: Forty-five days associated with nine earth mouths in nine cells, with five days to a cell. In each cell, the first four signs are painted in the corners, the fifth day designated by a spacer connected to the earth mouth. Within the cells, the reading order is counterclockwise; the nine cells occupy three registers and read from lower right to left, middle left to right, upper right to left.

19. 72: Pulque drinkers. Fifty-four days associated irregularly with nine drinkers of pulque, arranged in three registers. Only one day sign, Movement, is pictured, in the lower right cell. The other days are represented by spacers. The sets of days are 5.4.5.11.4.5.6.4.9. According to the direction the drinkers face, the reading order is from lower right to left, middle left to right, upper right to left.

20. 73: Four serpents. First four day signs associated with four inwardly facing serpents; the day signs appear in the curves in the serpents' bodies. (~ Borgia 72, which has the same serpents and arrangement but includes four gods and associates the *trecenas* with the gods and serpents as a compressed table)

21. 74: Corporeal/diagrammatic almanac. Forty day signs, twenty arranged around and on Tlazolteotl in a temple (top), and twenty arranged around and on a blue male in a destroyed temple (bottom). Irregular reading orders. (= Borgia 74)

22. 75: Corporeal/diagrammatic almanac. Forty day signs arranged over the double figure of Quetzalcoatl/Mictlantecuhli and in a frame around them. The first fifteen signs (Crocodile–Eagle) are on and around the bodies, in a roughly back and forth sequence, from top to bottom. A separate set of twenty-five signs (Crocodile–Serpent) frames the image; it reads counterclockwise, beginning in the lower right. (= Borgia 73, which has twenty signs on the bodies and twenty-six in the frame; ~ Borgia 56, Vaticanus B 76, which have different calendrics)

23. 76: Corporeal almanac. *Tonalpohualli* in *trecenas* associated with a double figure of Quetzalcoatl/Mictlantecuhli. Ten *trecena* signs are in a column on each side; twelve spacers are at the top on either side of the double figure. Reading order begins from lower right to lower left, and back and forth up the columns. (= Borgia 56; ~ Borgia 73, Vaticanus B 75, which have different calendrics)

24. 77 right: Deer of the east and north. Half of a *tonalpohualli* in *trecenas*, organized as a compressed table, with the *trecenas* of the east (1st, 5th, 9th, 13th, 17th) and north (2nd, 6th, 10th, 14th, 18th) associated with two deer (Fig. 70 right). Each cell has five signs and twelve spacers. Seemingly part of the subsequent almanac, which presents the west and south *trecenas* in association with the Cihuateteo and Macuil-tonaleque. (= Borgia 22a)

25. 77 left–79: The five Cihuateteo and Macuiltonaleque associated with the *trecenas* of the south and west, organized as parallel group lists (Fig. 70). The first and fifth day signs of each *trecena* are given, the rest replaced by spacers. The first signs in the west *trecenas* (bottom) identify their respective Cihuateteo; the fifth signs in the south *trecenas* (top) identify their respective Macuiltonaleque. Reads from right to left. (= Borgia 47ab–48ab; the same Cihuateteo and Macuiltonaleque pairs appear in Aubin No. 20)

26. 80–84: Venus almanac. *Tonalpohualli* organized as a compressed table of five cells that picture Tlahuizcalpantecuhtli spearing different images (Fig. 90). It requires thirteen passes through five periods of four days each. Each cell has thirteen day dates, identified by one day sign (Crocodile, Serpent, Water, Reed, Movement, respectively) and the coefficients 1–13. The three extra day signs that appear in the cells function as spacers. Reads from right to left. (= Borgia 53b left–54; = Cospi 9–11, which is abbreviated; ~ Venus almanac in Dresden 46–50, which has spearing scenes but differs calendrically)

27. 85–86: Corporeal almanac of twenty day signs arranged irregularly around a dog (p. 85) and a monkey (p. 86), with

deities and animal thieves (?) above. Reading order is roughly back and forth between the figures, every two days.

28. 87–94: Day sign patrons. Twenty day signs associated with their patrons and mantic scenes, as a list (Figs. 57, 58). Reads from right to left. (= Borgia 9–13, Vaticanus B 28–32; ~ Borgia 22b–23–24, which has different gods and scenes)

29. 95 right: Twenty day signs associated diagrammatically with four scorpions, with five signs per scorpion (Fig. 64). Reads roughly counterclockwise, beginning in upper left.

30. 95 left: First four *trecenas* radiating out of a central flint knife. The *trecenas* begin with the signs Jaguar, Deer, Flower, and Crocodile, each followed by twelve spacers.

31. 96: Corporeal almanac of twenty day signs arranged over a splayed deer (Fig. 59, Plate 5). Reading order begins in lower left and generally proceeds back and forth, from bottom to top. (= Borgia 53a left; ~ Tudela 125r, which has signs in a different order; conceptually related to corporeal almanacs on Borgia 17b [Tezcatlipoca], Fejérváry-Mayer 44 [Tezcatlipoca], Laud 23 [Tlaloc], and Vaticanus A/Ríos 54r [human])

Notes

I. Containers of the Knowledge of the World

1. For the challenges of displaying processes, relationships, and theoretical constructs in science, see Lynch (1985) and Elkins (1999:40–41).
2. Quoted by Turner (1975:207–208), whose analysis of ritual and divination among the Ndembu of Africa offers useful models for looking at the Mexican divinatory books.
3. For the burning of books, see the *Relación de la genealogía* (García Icazbalceta 1941:241) and *Origen de los Mexicanos* (García Icazbalceta 1941:257–258); Durán (1971:395–396, 1994:20); Zorita (1963:86, 174); Alva Ixtlilxochitl (1985, 1:527); see also the discussion in Boone (1998:154–155).
4. In addition to its European stylistic features, this assemblage of disparate genres bespeaks a colonial desire to preserve different manuscript types in a single document.
5. The Codex Magliabechiano, a painted encyclopedia of Aztec culture like the Codex Telleriano-Remensis and Codex Tudela, mentions a few day-sign auguries. Partial interpretations of *tonalamatls* are in the texts of Cervantes de Salazar (1971, 1:143–144); Córdova (1987:201–218); Durán (1971:391–393, 398–404); and Sahagún (1953–1982, bk. 4; 1997:160–174). Vestiges of a *tonalamatl* are also found in the Codex Mexicanus (13–14, 89–101).
6. It was finally published under the auspices of Alfredo Chavero. For Clavijero and the Cospi, see Laurecch Minelli (1992:51–53; 1999a:376–378); Anders, Jansen, and van der Loo (1994:9–18). For Fabrega and the Borgia, see Anders, Jansen, and Reyes García (1993:11–40). Anders, Jansen, and Pérez Jiménez (1994:27–81) give an excellent review of the history of research on the divinatory codices since the sixteenth century; Glass (1975b) offers a brief but valuable overview. Nicholson (1973) examines Eduard Seler's particular contribution, as do Anders, Jansen, and Reyes García (1993:41–48).
7. Vol. 1 includes the Telleriano-Remensis; vol. 2, the Vaticanus A/Ríos, Laud, and Cospi; vol. 3, the Borgia, Fejérváry-Mayer, and Vaticanus B; vol. 5, the Spanish text of Telleriano-Remensis and Italian text of Vaticanus A/Ríos; vol. 6, the English translation of Telleriano-Remensis and Vaticanus A/Ríos texts. Kingsborough's lithographs have been largely superseded by later facsimiles but remain valuable today for details that have subsequently been lost from the manuscripts.
8. Seler originally gathered only the Borgia, Cospi, Fejérváry-Mayer, Laud, and Vaticanus B under this term, but his later commentaries made comparisons with the Porfirio Díaz Reverse and Aubin No. 20, which are now considered to belong to the Borgia Group as well (e.g., Nowotny 1961).
9. The Codex Magliabechiano pictures and describes rituals, gods, and, briefly, the calendar; it is partially cognate with the Codex Tudela but contains no divinatory almanacs.
10. A color facsimile of the Laud did not appear until 1966, although the 1961 edition includes black and white photographs of its pages. The Codex Tudela was only discovered in the 1940s and first published in 1980.
11. Interpretations that build on Seler's astral models must

- also be used with caution (e.g., Hagar 1911, 1912; Beyer 1912; Burland 1973).
12. Of the religious manuscripts, vol. 1 includes the Telleriano-Remensis; vol. 2, Kingsborough's notes on the Telleriano-Remensis; vol. 3, Vaticanus A/Ríos with Spanish translation of Italian texts, Laud, Kingsborough's notes on Vaticanus A/Ríos; vol. 4, Cospi, Fejérváry-Mayer.
 13. See Hamann (2004) for the problems of reading Mesoamerican codices from a spine-bound perspective.
 14. Regrettably, folios 13 and 19 are transposed.
 15. Advances in the study of the Maya codices are being made especially by Anthony Aveni, Victoria R. Bricker, Harvey Bricker, Christine Hernández, Susan Milbrath, Merideth Paxton, and Gabrielle Vail. See, for example, the edited volumes on the Madrid Codex (Bricker and Vail 1997; Vail and Aveni 2004) and their bibliographies for individual articles and monographs.
 16. Brotherston (1992, 1995) has renamed Aubin No. 20 (Coixtlahuaca Map) and the Porfirio Díaz (Cuicatlan Screenfold), as well as a number of Mixtec historical codices. Anders and Jansen (1994:267–296) renamed the Porfirio Díaz the Codex of Tututepetongo; Jansen and Pérez Jiménez (2000:1–5, 2004) assigned new names (different from Brotherston's) for the eight major Mixtec histories and also proposed new names for all the Borgía Group codices (2004).
- ## 2. Time, the Ritual Calendar, and Divination
1. Kay Read and Ross Hassig offer interesting and complementary approaches to Aztec understandings of time. Read (1998) articulates the interface of time, the calendar, and sacrifice in the Aztec world from the perspective of religious studies. Hassig (2001) interrogates the Aztecs' control and manipulation of time for political ends.
 2. Edmonson (1986:120–126); see also Roys (1967:116–119) and Bricker (2002), who shows how the "Creation of the Maya Week" is a syncretistic text marrying Maya and Christian creation accounts.
 3. Ordinals 1 through 4 are *ce*, *ome*, *eyi* or *yeyi*, and *nahui*; ordinals 6 through 9 are *chicuace*, *chicome*, *chicueyi*, *chiconauhi*; ordinals 10 through 14 are *ma'tlactli*, *ma'tlactli once*, *ma'tlactli omome*, *ma'tlactli omeyi*, and *ma'tlactli onnahui* (Sullivan 1988:151). See the discussion in Payne and Closs (1986:214–218); Hurford (1987:86); Asher (1991:7–8).
 4. See Hassig (1982) for the timing of markets according to different periods of the calendar.
 5. For example, Codex Selden 3a, Cospi 21–31, Fejérváry-Mayer 5–22, Laud 22, 45–46. See the discussion in Chapter 6.
 6. An exception is the protocol on Fejérváry-Mayer 9, which enumerates quantities of sets of counted offerings for a ritual associated with three days: 7 House, 9 Wind, and 13 Flower. Although the coefficients 7 and 9 are rendered with disks, 13 is configured by two bars and three disks. Perhaps the painter realized that there was not sufficient space to fit thirteen disks and yielded to the efficiency of the bar and dot system.
 7. Even those people, like the Tlapanecs, who employed a different numerical sequence in the calendar (2–14 rather than 1–13) used the same day signs (see Codex Azoyu I and II).
 8. See Urton (1997:66) for an excellent discussion of ordinal numbers in Quechua; see also Crump (1990:9) for cardinal and ordinal numbers.
 9. For example, Codex Magliabechiano 4v, 5v, 8r, 8v; see also 11r–13r; Motolinia (1951:111).
 10. See discussions in Waterman (1916:323–327); Aveni (1980:148–151, 1989:197–203).
 11. See Aveni (1980:148–151, 169; 1989:200–201; 2001:140–145), Tedlock (1982:93), and Quiñones Keber (1995:156), who review the different proposals for the origin of the 260-day cycle and conclude that the human model is the surest. See also Broda (1969:14–16). Noriega (1954–1955:277) notes the correlations with Mars and the Moon and elaborates a number of others. A solar zenith model, first proposed by Zelia Nuttall in 1928 and most recently elaborated by Malmstrom (1997), argues that at the latitude of 14.8° N, along which the cities of Izapa and Copan are located, the zenith sun divides the solar year into 260 and 105 days. This model must fail because the 260 + 105 computation ignores the reoccurring cyclicity of the 260-day count (Henderson 1974), and the 260-day cycle predates both Izapa and Copan (Aveni 2001:144).
 12. See Schultze Jena (1933–1938, 1:35), B. Tedlock (1982:93), D. Tedlock (1985:232), Earle and Snow (1985), Jansen (1988b:161).
 13. It is not quite clear whether the Aztecs conceptualized the eighteen festival periods as "months" per se. The Maya clearly did, but the Aztec data are equivocal. No Prehispanic Aztec or Mixtec representations of the months have survived. The Spanish chroniclers give extremely varied accounts of the periods, naming, dating, and describing them differently, although there are common threads. Betty Brown (1977) has even argued for a loosely arranged festival cycle that was canonized into eighteen fixed months after the conquest. After the Spanish invasion, dates were sometimes given in both the

- tonalpohualli* count and the festival cycle; the entrance of Cortés into Mexico-Tenochtitlan is dated to 1 Wind, ninth day of Quecholli, for example.
14. Although Sahagún (1953–1982, bk. 2:171–172) and Durán (1971:395), among others, say the *nemontemi* had no day sign or number, they must have had day names in order for the year-bearer numbers and signs to advance by one each year (see discussion in Caso 1971:341–343).
 15. It is generally agreed that the year bearer was the last day of the month Tititl (and also the month Huetofoztli), but see Hassig (2001:13–15). Caso (1967:57–59, 1971:340–346) argued that this was the 360th day, the last day of the festival periods before the *nemontemi*; but in order for this to work, Tititl had to be the last month of the year and Izcalli the first month, although no chronicler says this. Most scholars recognize Atlcahualo (also Xilomanaliztli) as the first month and Izcalli as the last, although they accept the year bearer as the last day of Tititl (Kubler and Gibson 1951:46–52; Nicholson 1971b:Table 4; Carrasco 1979; Broda 1983:149).
 16. See, however, note 15 of this chapter for disagreements about the first month of the year. Previous critics of Caso's correlation include Kubler and Gibson (1951:20–21, 42–45) and Prem (1984, 1988:135); but after extensive investigation, Prem (n.d., personal communication, January 2001) has determined that Caso is indeed correct. Tena's (1987) correlation generally agrees with (and supports) Caso on the dating of conquest events, but it proposes that a "leap day" was factored in every four years as a sixth *nemontemi*. The evidence for a leap day adjustment is very weak, however, and the Maya clearly did not adjust for it (see Thompson 1971:121, 317–320; Bricker, Bricker, and Wulffing 1997:S25, Table 2, fig. 4). Most scholars feel a leap day adjustment would have wreaked havoc on the purity of the calendrical cycles (e.g., Thompson 1971:121; Aveni 1989: 203).
 17. The Aztec/Mixtec year correlation was first explained by Jiménez Moreno and Mateos Higuera (1940). Other propositions for variant year counts in valley of Mexico cities, such as those advanced by Kirchhoff (1954–1955), Jiménez Moreno (1961), and Davies (1973:193–210, chart), are not universally accepted; see Caso (1967:48); Nicholson (1971a:70, 1976:190–191), and Boone (1992:50–52, 152–153, 2000b:254), who have argued against them. The Tlapanecs in Guerrero and the Cuicatecs in southern Puebla may have used variant *tonalpohualli* counts, because the Tlapanec Codex Azoyu I and II and the Cuicatec Codex Porfirio Díaz Obverse, which are historical documents, name the years with the numbers 2–14 rather than 1–13 and the year bearers Deer, Grass, Movement, and Wind. The divinatory section of the Porfirio Díaz Reverse, which is independent of the painted history, follows the Aztec/Mixtec system, however. None of the extant divinatory codices uses the 2–14 numbers.
 18. A gloss in the Codex Telleriano-Remensis (41v) says that the Aztecs used to drill the new fire in the year 1 Rabbit; but because that year was always difficult for them (often being a year of famine), Moctezuma moved the New Fire Ceremony to 2 Reed (Quiñones Keber 1995:274). Most scholars accept this principle that the date of the ceremony was changed because 1 Rabbit was a famine year, although they do not agree on when the change was made. See summary discussion and critique in Hassig (2001:38–47, 58–61, 84–97, et passim). No Aztec sculptures or paintings date any New Fire Ceremony to year 1 Rabbit, however, and the annotator who wrote the gloss was not one of the manuscript's principal annotators (Quiñones Keber 1995:229, 274).
 19. None of the divinatory books seem to be of maguey paper, although other books and records (e.g., part of Codex Huejotzingo) were made from this paper (see Díaz del Castillo 1956:157; Motolinia 1971:365). The hide of the Codex Colombino, a Mixtec genealogical history, is from the pronghorn (*Antilocapra americana*) (Caso 1966b:101–102); see discussion of hides, papers, and formats in Boone (2000b:23) and, for the Cospi and Vaticanus B in particular, Laurencich Minelli (1999a) and Laurencich Minelli, Gasparotto, and Valdrè (1993).
 20. For the measurements of the Borbonicus, Vaticanus B, and Aubin No. 20, see Glass (1975a:97, 228, 91). Aubin No. 20 also has tack holes along its edges; information on this manuscript is based on personal study of the original.
 21. Information based on personal study of the codex. For a discussion of gessos and pigments, see Boone (2000b:23–24) and, for the Cospi and Vaticanus B, Laurencich Minelli (1999a, 1999b) and Laurencich Minelli, Gasparotto, and Valdrè (1993).
 22. Documents painted on maguey fiber and cotton cloth (the latter called *lienzos*) have also survived from the sixteenth century, although none have a divinatory content; see the discussion in Boone 2000b:23–24.
 23. Zorita (1963:140) tells how Andrés de Olmos had his informants translate into alphabetic text the painted books of the *huehuetlatolli* (discussed in León-Portilla 1991:10–14). Book 6 of Sahagún's *Florentine Codex* (1953–1982) is devoted to the *huehuetlatolli*.
 24. Other forms of maize divination, widespread in Mesoamerica, rely more on the placement and grouping of scattered seeds rather than on their number; see Ruiz de Alarcón (1984:154) and Sandstrom (1991:235–237).

25. See Molina (1970, 2nd pagination:132) and Sahagún (1953–1982, bk. 4:31).
26. See Durán (1994:223, 445, 461, 463, 485, 490–493), Sahagún (1953–1982, bk. 8:18–19), and Díaz del Castillo (1956:245).
27. For the conflation of the terms “soothsayer,” “astrologer,” “diviner,” and “sorcerer,” see Sahagún (1953–1982, bk. 4:41, 101, bk. 10:177, bk. 12:21–22, 1997:213) and Durán (1971:459, 1994:461, 463). Molina (1970, 2nd pagination: 63) translates *naualli* as *bruja* (witch or magician). For the transformative ability of sorcerers, see Sahagún (1953–1982, bk. 4:42).
28. According to Sahagún (1953–1982, bk. 12:21–22, 33) Moctezuma sent “in nanaoalti in tlatlacateculo, in tetlachivianjme” and “in tlacihque,” which Anderson and Dibble translate as “magicians, wizards, sorcerers” and “soothsayers.” See also Lockhart (1993:82–85, 100–102). Durán (1994:539–540) mentions that Cuauhtemoc sent enchanter and sorcerers against the Spaniards.
29. Sahagún (1997:210–212). See also Garibay’s (1944–1947) study of these terms, which builds on Seler (1990–1998, 2:43–47), as well as López Austin (1967a) and Ortiz de Montellano (1990:140). Garibay (1944–1947:169–171) translates *naoalli* as “magician, one who fools or dissimulates as in magic tricks,” and following Molina translates *tlacihque* as “astrologer,” because the root *ciuh* perhaps denotes meteorological phenomena.
30. These destinies accompanied the days 1 Rain, 1 Grass, 1 Lizard, and 1 Wind (Sahagún 1953–1982, bk. 4:42–43, 101, 1997:169, 170, 172, 163).
31. English translation by León-Portilla (1963:18–19) accompanied by a seminal exegesis on the Aztec philosopher. See León-Portilla (1986:86, 138–141) for the original Nahuatl and Spanish texts and León-Portilla’s Spanish translation.
32. Although the *Historia de los Mexicanos por sus pinturas* (1979:25), Codex Chimalpopoca (1992:25, 147), Mendieta (1971:97), and perhaps Ruiz de Alarcón (1984:56, 151, but see 154) name the man Oxomoco and the woman Cipactonal, Sahagún (1953–1982, bk. 4:4) identifies Cipactonal as male and Oxomoco as female, as do all extant pictorial representations of the pair (Figs. 4–7; Codex Borgia 38); see also Telleriano-Remensis 18v (Quiñones Keber 1995:265) and Serna (1953:122, 241, 252, 263); Cipactonal appears without Oxomoco in Borgia 35. Seler (1963, 1:114, 138, 1990–1998, 2:45) and López Austin (1988, 1:238) discuss the pair.
33. Mendieta (1971:97) notes that the couple lived in a cave in the Cuernavaca region (Yauhtepec is nearby).
34. Ixtlilton is pictured and described in the Codex Magliabechiano (62v–63r), where he is included as one of the pulque gods, and in Sahagún’s *Primeros memoriales* (1993: Palacio Real ms. 262v, 1997:101) and Florentine Codex (1953–1982, bk. 1:35–36, pl. 16). The Macuiltonaleque are discussed in Chapter 5.
35. Molina (1970, 2nd pagination:113) translates *tiçitl* as “doctor or diviner and soothsayer”; Siméon (1981:547) gives “doctor, midwife, diviner, sorcerer.” Physicians are described by Sahagún (1953–1982, bk. 10:30–53), Durán (1971:118), and Ruiz de Alarcón (1984:45). The Codex Tudela (49r) speaks of midwives as sorcerers (Tudela de la Orden 1980:278; Batalla Rosado 2002:419).
36. The Magliabechiano (77v) text specifies twenty grains (Boone 1983, 2:214).
37. These methods are mentioned or described by Durán (1971:118, 219, 269, 1994:492), Motolinia (1951:206–207), Mendieta (1971:109–110), Ruiz de Alarcón (1984:141–155), Sahagún (1953–1982, bk. 1:15, 61, bk. 9:37–38, 1997:176–177), and Torquemada (1975–1983, 3:130–131). See also the discussion by Seler (1990–1998, 2:43–47) and especially by Ortiz de Montellano (1990:144–146).
38. See Tedlock (1982) for the Quiche Maya, who divine with the 260-day calendar; Vogt (1969:651) for the Tzotzil Maya; Redfield and Villa Rojas (1934:170) for the Yucatec Maya; Oettinger (1979) for the Tlapanecs and references to the Mixes, Mazatecs, and Zapotecs; Lipp (1991:152, 166, 168) for the Mixes; and Sandstrom (1991:235–237) for the Nahuas of the southern Huasteca.
39. For *toltecayotl*, see León-Portilla (1963:79–80, 159, 167–169, 1980:7).
40. Although the *calmecac* is usually said to have been a school for noble children only, Sahagún specifies that non-noble children with special abilities were also schooled there; he indicates that girls as well as boys could attend (Sahagún 1953–1982, bk. 3:61, bk. 6:209–218).
41. Alva Ixtlilxochitl (1985, 1:270) tells of a single long book, called *teoamoxtli* (god/divine book or sacred writing), that the celebrated Toltec astrologer Huemac/Huematzin created to synthesize all the cosmogonies and histories and to summarize all “the things of science and knowledge.”
42. Sahagún (1953–1982, bk. 2:40), Mendieta (1971:108, 126), Torquemada (1975–1983, 4:154), and Las Casas (1967, 2:411). Old matchmakers were in charge of arranging the marriages, negotiating between the families, and picking a good day for the ceremony (these were Reed, Monkey, Crocodile, and Rain) (Sahagún 1953–1982, bk. 2:40). Young men married at the age of twenty or twenty-one (Durán 1971:292).
43. Sahagún (1953–1982, bk. 10:42) describes the “good horticulturalist” as among other things “a knower of books,

a reader of the day signs, of the months, of the years,” which implies that the masters of occupations that relied on the day count knew the destinies as they affected their specialties. Long-distance merchants also seem themselves to have known the best days to travel (Sahagún 1953–1982, bk. 9:9).

44. Sahagún (1953–1982, bk. 9:9), Pomar (Acuña 1982–1988, 8:72), Torquemada (1975–1983, 4:204), Ruiz de Alarcón (1984:45), and the Codex Mendoza 57r (Berdan and Anawalt 1997:119) all say that the washing and naming took place on the fourth day if all was well. Motolinia (1951:111, 181) gives the seventh day, as well as the eighth and tenth day, for the washing.
45. López Austin (1997:26–28) explains which were the lucky and unlucky day numbers according to Sahagún. My discussion of the marriage almanacs in Chapter 5 also explains which combinations of numerical coefficients are auspicious for having children.

3. The Symbolic Vocabulary of the Almanacs

1. See Anders and Jansen (1993:107–152), who explore the symbolic meaning behind a number of celestial and terrestrial phenomena, plants, animals, human poses and gestures, and artifacts.
2. Seler (1900–1901:9–16) discusses the origin and images of the day signs, drawing on linguistic comparisons. Waterman (1916) analyzes the day sign images.
3. Only on Vaticanus B 71 and 95, which seem to have been painted by the same artist (who is different from the principal one), is Lizard pictured as a profile head. In contrast, a number of Mixtec genealogical-historical codices represent Lizard as a profile head (e.g., Bodley, Selden, Lienzo of Zacatepec), although the Zouche-Nuttall and Vienna feature the full-body Lizard. The Cospi obverse, which tends to elaborate its day signs, depicts both Lizard and Rabbit as full-figured and sometimes adds front legs to Deer, Dog, and Jaguar.
4. Indeed, Brotherston (1995) uses the term “Tooth” for this sign. See Peterson (1983) for an explanation of the physical and metaphoric properties of *malinalli* grass.
5. In the Telleriano-Remensis and Vaticanus A/Ríos, however, Wind is the profile face of Quetzalcoatl without the buccal mask.
6. With few exceptions, the water flows in the direction the other day signs face; this means that the trompe l’oeil face looks backward.
7. Abbreviations appear on Fejérváry-Mayer (15, 20, 21, 34, 36, 39), Laud (45), Cospi Reverse (29), and Vaticanus B (4, jaguar claw). See Seler (1900–1901:11, 13) and Waterman (1916:351, 363–365), although Waterman identifies the extruded eye as the ear ornament of Monkey.
8. An exception is 13 Flower on Fejérváry-Mayer 9 (see Chapter 2, n. 6) and possibly the crossed bars beneath Rain on Fejérváry-Mayer 20, which may signify 10 Rain.
9. The grouping of large numbers of disks may have a practical basis also, for U.S. psychologists have found that individuals can readily discriminate numbers of dots up to six; above that, people estimate the number and make errors (G. Miller 1956:90).
10. Day names appear in the mantic cells of Borbonicus 14 (1 Dog, 3 Eagle, 4 Movement with Xipe Totec in *trecena* 14), Telleriano-Remensis 14v (1 Reed naming Tlahuizcalpantecuhtli in *trecena* 9), Borgia 65 and Vaticanus B 64 (4 Movement with Xolotl in *trecena* 16), Borgia 66 and Vaticanus B 54 (a possible day name 12 Rabbit with solar and lunar gods), and Borgia 71 (4 Movement with the sun god). On Fejérváry-Mayer 43, the day 1 Serpent is painted next to a crossroads whose four roads end in 1 Crocodile, 1 Wind, 1 Death, and 1 Movement; this presentation may be more of a protocol than an almanac per se, however. See Furst (1978b) for the metaphoric value of the year 1 Reed.
11. A possible exception is the almanac on Vaticanus B 95, where the first four *trecenas* extend outward from an anthropomorphized flint knife.
12. Data in Table 2 are derived from Seler (1900–1901, 1902–1903), Nicholson (1971b), Spranz (1973a), Nicholson and Quiñones Keber (1983), and Quiñones Keber (1995:156–190). Studies of specific supernaturals are cited individually. The Mixtec calendrical names for a number of deities are well known (e.g., 1 Death is the sun god; 1 Movement is Venus; 9 Wind is equivalent to Quetzalcoatl), and, as John Pohl (personal communication, 2005) points out, others are given in the Yanhuitlan idolatry trials and the *Relaciones geográficas*. For the Mixtec supernaturals, see Jansen (1982b, 1:281–288), Pohl (1994), Terraciano (2001:252–271), and Rossell and Ojeda Díaz (2003).
13. An exception is Cospi 1–8, where some of the nine Lords of the Night are represented by characteristic objects (e.g., Mictlantecuhtli as a bone, Tlaloc as his staff) rather than by profile faces. See Anders, Jansen, and van der Loo (1994:142–160).
14. For the identities of the Night Lords, I follow Seler (1900–1901:21–26, 1990–1998, 1:190–191), Caso (1971:336), and Nicholson (1971b:table 3). For the Volatiles, see also Gilonne (1977).
15. León y Gama identified his sixteenth-century source as Cristóbal del Castillo, but the calendrical text he used is

- now thought more probably to be a copy of Sahagún's *Arte adivinatoria* (Gibson and Glass 1975:330, 369–370).
16. The identifications of the Day Lords and Volatiles follow Seler (1900–1901:26–35, 1990–1998, 1:191–193), Caso (1971:335), and Nicholson (1971b:table 3). For the Volatiles, see also Gilonne (1977).
 17. For four positions, the *Histoire* gives variant but related names: in position 2 “the goddess of the earth, Xiuhltli [*sic*]”; in position 7 Tonacateuctli and Tonacacihuatli; in position 11 Yohualtecuhtli; and in position 13 Omete-cuhtli.
 18. The identifications of the patrons of the day signs follow Seler (1963, 1:63–162), Caso (1971:337–338), and Nicholson (1971b:table 3).
 19. Identifications of the *trecena* patrons follow Seler (1900–1901:36–126), Caso (1971:338), and Nicholson (1971b:table 3).
 20. Troike (1982) has identified several poses and gestures in the Mixtec Codex Colombino-Becker (a genealogical history) and emphasizes that specific gestures do not necessarily carry the same meaning from codex to codex. For Maya poses and gestures, see Benson (1974), Miller (1981, 1983), Kurbjuhn (1990), Ancona-Ha, Pérez de Lara, and van Stone (2000), and Palka (2002).
 21. This pose characterizes the female (Ixnextli) in *trecena* 4 (Borgia 64, Vaticanus B 52, Telleriano-Remensis 11r; Figs. 48–50); and in the marriage almanacs, the female half of the couple whose day numbers equal eight and the errant male in the couple whose numbers equal twenty-four (Fig. 82a). Variations are the dancer in *trecena* 4 (Borgia 64, Vaticanus B 52; Figs. 49, 50), the female in Chalchiuhtlicue's water in *trecena* 5 (Borgia 65), the adulterers in *trecena* 12 (Telleriano-Remensis 17r), Huehucoyotl as lord of the day sign Movement (Vaticanus B 93), and Yacatecuhtli at the crossroads (Fejérváry-Mayer 37). Klein (2001:208–209) links it specifically to sexual misconduct. Klein (2001:207) also has proposed that the Cihuateteo's inwardly turned feet on Vaticanus B 77 refer to her infidelity.
 22. This gesture is found in the female (Ixnextli) in *trecena* 4 (Borgia 64, Vaticanus B 52, Telleriano-Remensis 11r; Figs. 48–50), a jeweled male in *trecena* 2 (Borgia 62, Vaticanus B 50), a rich merchant (Borgia 55; Fig. 37), and husbands and wives in successful couples with the day numbers 3, 4, 7, and 14 in the marriage almanacs (Borgia 59–60).
 23. This contrasts with Maya artistic practice, which very occasionally represents such emotions as fear, abandon, lust, and grief (Houston 2001).
 24. Granata (1980) identified the black spotted snake seen frequently in the Vaticanus B as a tropical boa. It often appears with rattles, however, and probably represents one of the similarly patterned species of the *Crotalus* genus of rattlesnakes (e.g., Campbell and Lamar 1989:figs. 349, 363, 369, 370), which are native to highland Mexico.
 25. For ball courts, see Nicholson and Quiñones Keber (1991); for fasting cords, see Durán (1971:163) and the name glyphs of Nezahualcoyotl and Nezahualpilli.
 26. Ordinary stars, as opposed to elaborate “great star” images, are depicted as round eyes formed of two concentric circles with a half field of red in the outer circle. The same round eyes characterize many supernaturals and may better be called “supernatural eyes.” See Beyer (1965b).
 27. See Quiñones Keber (1987), who discusses such allusions to ritual in the *trecena* panels of the Borbonicus.
 28. See Klein (1987) for an extended discussion of auto-sacrifice and bloodletting implements.
 29. For rubber balls, see Stone (2002).
 30. Seler (1990–1998, 3:87–113) explores the iconography of existing boxes within the context of sacrifice and bloodletting.
 31. The Aztec slit drum, the *teponaztli*, does not appear in the extant divinatory codices. See Seler (1990–1998, 3:74–78) for a discussion of indigenous musical instruments and (1990–1998, 2:104–148) for the Malinalco drum in particular.
 32. Klein (2001:207) suggests that crossroads represent an excessive number of paths and therefore symbolize lack of direction, disorder, or immortality. As explained in Chapter 5, the crossroads communicate a negative value when they are present in the almanacs pertaining to the Night Lords (Borgia 14, Fejérváry-Mayer 2–4, Vaticanus B 19b–23b; Figs. 52, 53).
 33. Taube (1993:3) reads the half-sun, half-night combination as a “darkened sun” or “half covered sun,” which privileges sunset rather than sunrise and implies that the sun disk stands specifically for that celestial body as a prior entity that is being inflicted by the oncoming darkness (i.e., darkness as an agent that acts upon the nominal sun); this makes the symbol an event. I prefer instead to read the sun/night combination nominally, as a static pairing of equal opposites.
 34. The *Historia de los Mexicanos por sus pinturas* and the *Anales de Cuauhtitlan* both date the earth's creation to 1 Rabbit (Garibay 1979:32; Bierhorst 1992:25). The year or day date 1 Rabbit is carved along with Tlaltecuhltli or other imagery on the undersides of several major Aztec sculptures (e.g., Coatlicue and Yolotlicue, Coyolxauhqui head, Stone of the Five Suns in the Art Institute of Chicago, Bilimek Pulque Vessel; see Nicholson and Quiñones Keber 1983:42, 50, 62).

4. Structures of Prophetic Knowledge

1. Just five times do almanacs start or stop in the middle of a page, and then it is because of an otherwise awkward fit. The cognate almanacs on Borgia 49a–53a and Vaticanus B 19a–23a have nine compartments, presented two to a page until the last, which extends halfway into the next page. Another pair of cognates, which associate ten *trecenas* with the five Macuiltonaleque and five Cihuateco in five compartments each, extend over two and a half pages on Borgia 47ab–48ab and Vaticanus B 77–79. On Vaticanus B 95, the painter fit two almanacs on a single page.
2. Exceptions are side-by-side protocols on Fejérváry-Mayer 17, 18, 20, 22.
3. Such two-page almanacs are on Borgia 47–48, 53b–54ab, 75–76; Fejérváry-Mayer 33av–34ab, 41a–42a; Vaticanus B 13–14, 15–16, 17–18, 85–86. Almanacs that organize related information on facing pages include those on Laud 9–16, 25–32 and Vaticanus B 75–76.
4. See Hamann (2004), who discusses the disjunction between Western approaches to reading spine-bound texts and the Mesoamerican way of viewing the Mixtec screenfolds.
5. The painters adjusted the width of their cells to fit within the page on Borgia 1–8, 22b, 47c–48c, 58–60; Fejérváry-Mayer 23a–29a; Laud 43a–44a; Vaticanus B 28–32, 42b–33b. The painters allowed cells to span the interior folds between pages on Laud 37–38, where the scene for number 16 crosses the interior fold, and in the *in extenso* almanacs on Cospi 1–8 and Vaticanus B 1–8, where the painters presented the thirteen days of each *trecena* across a two-page spread by having the seventh day span the fold; in contrast, the cognate Borgia (1–8) almanac arranges six days on the first page and seven days on the second page of each two-page spread (see Fig. 40).
6. Arnheim (1971: 236) said this about language, which “assists the mind in stabilizing and preserving intellectual entities.”
7. See also the discussion in Andrews and Hassig (1988: 607, 615).
8. The only exception is the Codex Porfirio Díaz Reverse, which is drawn entirely in black with no other color added.
9. Sloppy instances where costume elements extend into other cells occur in Cospi 9–11; Vaticanus B 19a, 21a, 22a, 45, 48; and Porfirio Díaz Reverse 39. The two intentional violations occur in adjacent almanacs in the Vaticanus B: one is a multiscene, diagrammatic almanac that relates the twenty day signs to two animals, where framing lines unite the upper and lower scenes (85–86). The other (87–94) is a listing of the twenty day signs with their patrons and mantic scenes, with the day sign, patron, and scene each in a separate register; in six instances excrement from figures in the upper scenes flows onto the patrons in the cells below (Fig. 36).
10. The surprising exception is the Codex Borbonicus, whose day signs, Night Lords, Day Lords, and Volatiles face opposite the reading order. (The day signs that encircle the center of the Aztec Calendar Stone also face against the reading order.) Three other codical exceptions seem to represent mistakes, probably made when the content was copied from earlier sources. On Vaticanus B 1–2, the day signs on the first two pages of the eight-page *in extenso* almanac face against the flow, although the mantic figures face with the flow; this was surely an error that the painter corrected on page 3. On Vaticanus B 28a–32a and Laud 17a–24a, the day signs and deities in the top register of these two-register almanacs face against the reading order, although those in the bottom register face correctly. Occasionally elsewhere in the corpus an individual day sign is flipped (e.g., Vaticanus B 4f). In these instances of reversed signs, the reading order of the almanac is determined by the regular progression of the day signs.
11. The calendrical units read counterclockwise on Aubin No. 20; Borgia 25, 26, 29, 71, 73; Borbonicus 21–22; Fejérváry-Mayer 1; and Vaticanus B 13–14, 15–16, 69, 70, 73. Dancers at the wedding of Lady 6 Monkey and Lord 11 Wind in the Codex Selden (7) move in a counterclockwise circle, as do the dancers portrayed by Durán’s (1971:p. 31) artist; dancers around the Xocotl pole in the Codex Borbonicus (28) move counterclockwise as well. Footprints on circular place signs in the Codex Vienna (7, 19) likewise go counterclockwise. After the conquest, the iconographic programs of sixteenth-century monasteries were organized to reflect counterclockwise processions around the cloisters and *atrios* (McAndrew 1965:285; Peterson 1993:163, Fig. 126).
12. For readings of the mantic forces, see Seler (1902–1903: 127–190, 1963, 1:63–162), Anders and Jansen (1993:343–354), and Anders, Jansen, and Reyes García (1993:91–104).
13. Anders, Jansen, and Reyes García (1993:297) point out that Nowotny (1961: 208, 2005: 219) and Thompson (1966:159–165) identified the travelers specifically as merchants. León-Portilla (1985:88) follows Thompson (*ibid.*) in identifying them as patrons of the *pochteca* from central Mexico.
14. Note that in the third scene the three disks precede the day sign Death, although they represent day signs that follow Death.

15. The term *in extenso* was coined by Nowotny (1961:229, 2005:219).
16. The Vaticanus B version also has six days on the first page and seven days on the second page of each two-page spread, but the Cospi has six and a half days per page, for the seventh day spans the page fold.
17. The cognate almanacs in the Vaticanus B and Cospi read from left to right, because the relevant side of these manuscripts begins on the left. Thus, like the Borgia, their *in extenso* almanacs read from the outside in, beginning with the bottom row.
18. The lower scenes in the cognate almanacs (Cospi 1–8; Vaticanus B 1–8) are virtually the same as in the Borgia, but the upper scenes correspond less well. The position of some upper scenes is shifted, which suggests scribal error (Anders, Jansen, and van der Loo 1994:140). Anders, Jansen, and van der Loo (1994:170–235) describe the mantic images in the Cospi version and compare them with those in the other cognates.
19. Anders, Jansen, and Reyes García (1993:79–81) and Anders, Jansen, and van der Loo (1994:134–139) emphasize the point that each two-page spread contains five *trecenas*, which they, following Selser (1902–1903:5–12, 1963, 1:20), identify as belonging to the cardinal directions; indeed Selser (1902–1903:3–65, 1963, 1:11–62) based his interpretation of the almanac on the directional association of the two-page spreads. Although some other almanacs (e.g., Borgia 49–53) do assign these *trecena* groupings (where every fifth *trecena* is grouped together) to the cardinal directions, other almanacs associate different *trecena* groupings with the directions (e.g., Fejérváry-Mayer 1, which assigns five sequential *trecenas* to each direction). The *in extenso* almanac, however, does not consider the directions pictorially at all. Instead, the structure of the almanac stresses the relationship within each column of day signs.
20. For contemporary counts of 9×9 and 7×7 , see Lipp (1985:85; 1991:132) and Anders, Jansen, and van der Loo (1994:161). The footprints effectively divide the 160-day count into periods of $81 + 49 + 81 + 49$ days, or $130 (81 + 49)$ and $130 (81 + 49)$ days. The direction of the footprints (pointing either forward or upward) varies considerably in the Borgia, but less so in the Cospi, where all but three footprints face forward. It is not known whether these orientations are meaningful or are merely the result of the artists' attempting to place the footprints in the cells without interfering with the day signs. Regarding the 4 Lizard start date, Selser (1900–1901:17, 1902–1903:5) noted that the contact-period Yucatec Maya began their count of twenty days on the day Lizard. The 10 Movement “ending” date serves as the starting date for the almanac on Borgia 25—which Aveni (1999) and Bricker (2001:S31–S35) have associated with the Venus cycle—but, again, the significance of this is not known.
21. The individuals making the offerings correspond to the deities associated with the temples. They are the solar god of pleasure Xochipilli, the god of sacrifice and frost Itztlacolihqui, the maize god Centeotl, and the death god Mictlantecuhli; Selser (1901–1902:171–180) recognized the gods and temples as representing or being associated with the four directions east, north, west, and south. See also Anders, Jansen, and Pérez Jiménez (1994:273–276). Cognates are Borgia 49b–53b and Cospi 12–13 (but lacking the spacers).
22. The Zapotec chronicler Juan de Córdova (1987:203) speaks of deerskins painted with day signs placed on the various parts. See Selser (1902–1903:328, 1963, 2:111–112), Anders and Jansen (1993:359–362), and Anders, Jansen, and Reyes García (1993:285–288).
23. Durán (1971:400) and Sahagún (1953–1982, bk. 4:83) say those born on the sign will be wealthy and strong. The Borbonicus (12), Tonalamatl Aubin (12), and Telleriano-Remensis (16v–17r), however, picture male and female adulterers being stoned to death in the mantic panel for the *trecena* beginning on 1 Lizard, and the second annotator of the Telleriano-Remensis says that those born on these days will be sinners and adulterers (Quiñones Keber 1995:264).

5. The Almanacs

1. Selser (1901–1902, 1902–1903, 1963), Nowotny (1961, 2005), and Anders, Jansen, and their other co-authors of the 1990s commentaries have established the standard of referring to the almanacs as chapters and numbering them sequentially in each codex. See also León-Portilla (1985:20–21).
2. See Boone (2006), which argues, counter to Burland (1948:373, 1966:13, 22–25) and Anders and Jansen (1994:156–158, 219, 259), that the opening and closing almanacs of the Laud are not calendrically incomplete and that the manuscript's physical properties instead argue that it has not lost opening or closing pages.
3. As Quiñones Keber (2002:271–273) has pointed out, Sahagún's focus was on the final prognostication rather than on the individual images that would combine to compose the fate.
4. His coverage is virtually complete for *trecenas* 1, 3, and 4–9.
5. Writing in the early nineteenth century, Antonio León y Gama (1832, 1:31, 2:11–15) also listed the Lords of the

- Night, stating that “these are the same as those mentioned by Cristóbal del Castillo.” The relevant Castillo text has not survived, and Gibson and Glass (1975:330) suggested León y Gama was actually referring to a copy of Sahagún’s *Arte adivinatorio*. The names that León y Gama assigned to the Night Lords are a variation on those given by other chroniclers: Xiuhtecuitli or Tletl, Tecpatl, Xochitl, Cinteotl, Miquiztli, Atl symbolized by Chalchihuitlicue, Tlazolteotl, Tepeyolotli, and Quiahuitl symbolized by Tlaloc.
6. Anders and Jansen (1993:81–91) discuss the characterizations good, bad, and indifferent.
 7. Selser (1900–1901:34) identifies these deities of the Volatiles, who form a series distinct from the Day Lord series, as Tlahuizcalpantecuhtli, Ixtlilton (?), Xochipilli, Xipe Totec, Yaotl, Uauantli, Xiuhtecuitli (?), Tlaloc, Tlaloc, Tezcatlipoca, Xochipilli, Centeotl, and Xochiquetzal.
 8. Selser (1900–1901:53, 1963, 2:183) describes Huehuecoyotl as a god of sexuality and worldly pleasure because he is the patron of the day sign Lizard, which Selser (1963, 1:77–80) links to exuberance and sexuality. Indeed in the body part almanacs, discussed below, Lizard is always linked to the penis or in the Vaticanus A/Ríos to the womb; in the marriage almanac, a lizard seems to function as a symbol of lust. In the *veintena* section of the Borbonicus (21), two figures of Huehuecoyotl participate in the feast of Toci, where Huastecs hold out their oversized penises. My readings of the *treceña* panels draw on Selser (1900–1901:53–56, 1902–1903:251–253, 1963, 2:183–184) and Anders, Jansen, and Reyes García (1991:130–131) but go further in utilizing the alphabetic texts and differ to a greater or lesser extent about particulars. For a discourse on Huehuecoyotl, and especially his association with Tezcatlipoca, see Olivier (1999).
 9. Sahagún (1953–1982, bk. 1:73, 35) describes Ixtlilton as a “god of the ancients,” associated with divination and healing, whose “black water” (a deep bowl of black liquid) was said to heal sick children and reveal adulterers and thieves. At Ixtlilton’s temple, Tlacuilocan (Painted Place or Place of the Painter/Scribe), offerings were made when children first learned to speak (Sahagún 1953–1982, bk. 2:212). The Codex Magliabechiano (62v–63r) includes Ixtlilton among the pulque gods.
 10. Sahagún (1953–1982, bk. 1:31–32); Durán (1971:289–291, 306). Macuilxochitl appears as patron of the patolli game on Magliabechiano 60r, and he is among the gods pictured and described by Sahagún in his *Primeros memoriales* (1993: Pal. Real 265v, 1997:107) and Florentine Codex (1953–1982, bk. 1:31–32, fig. 14).
 11. On the meaning and appearance of the *ilhuitl* sign, see Peterson (1993: 47–50).
 12. The Tonalamatl Aubin artist occasionally painted the wrong Night Lord, perhaps because he or she was copying a manuscript in which the days read in a different order. Erroneous or transposed Night Lords appear on pp. 3, 8, 10, 11, 13, 14, and 15; all the Night Lords on pp. 19 and 20 are out of order (Selser 1900–1901:25–26; also Hassig 2001:174 n. 43). Durand-Forest (1989) proposes that some of the Night Lords in the Tonalamatl Aubin were intentionally reordered as a play of oppositions or a grouping of complementary pairs; such a motive, however, requires a degree of intellectual nuance that the Tonalamatl Aubin otherwise lacks.
 13. Motolinia (1971:341), partially repeated by Mendieta (1971:158–159), and discussed by Anders and Jansen (1993:86).
 14. Selser (1902–1903:127–190, 1963, 1:63–162, 225–244); Anders and Jansen (1993:227–238, 343–354); Anders, Jansen, and Reyes García (1993:91–104, 147–158).
 15. This section draws on the fuller discussions by Anders and Jansen (1993:93–106) and Viesca, Aranda, and Ramos (1998). See also Andrews and Hassig (1988), who argue against a Precolumbian system of medical astrology based on the corporeal almanacs.
 16. See the stone sculpture of Xochipilli from Tlalmanalco (Solís 1991:pl. 103ab), Sahagún (1953–1982, bk. 1:31–32, fig. 14, 1993: Pal. Real 265v, 1997:107), and the Codex Magliabechiano (4v). The four disks also figure in the costume of the related gods Huehuecoyotl (Borbonicus 30, Telleriano-Remensis 10v) and Ixtlilton (Magliabechiano 63r; Sahagún 1953–1982, bk. 1:35–36, fig. 16).
 17. The Vaticanus B omits the day signs Vulture, Movement, Flint, and Rain, which in the Borgia are located around the ears and at Mictlantecuhtli’s rump; probably they were simply lost in the process of copying such a rich image. The Borgia adds an extra Death in the lower left corner. The signs follow no particular route and usually seem unrelated to their body part (e.g., Reed and Eagle at the feet).
 18. The Vaticanus B (73) has a similar but simpler almanac, which lacks the gods, features slightly different serpents that have only eleven disks on their bodies, has only the first four day signs, and begins in the upper right.
 19. See Selser (1902–1903:327); Anders and Jansen (1993: 309–310, 355–356).
 20. Brotherston (1976) and Coggins (1980) have argued that east and west were the two primary directions, and indeed the god and trees of east and west are the only ones standing on the platforms attached to the central cell. The identifications of the images generally follow Selser (1901–1902:5–3) and/or Nowotny (1961:226–227, pl. 45A, 2005:148–149, 242–244). See also León-Portilla

- (1985:28–31). León Portilla (1985:31) suggests the thorny tree of the west is a ceiba, and Aveni (2001:151) identified the tall rushes of the northeast as the guacamaya plant.
21. As explained in Chapter 9, the very similar formée cross almanac in the Maya Codex Madrid (75–76) is probably copied from a central Mexican almanac very much like Fejérváry-Mayer 1 (Just 2000, 2004).
 22. The annotator of the Tudela names the lords and trees: east—Tlaloc, Tonatiuh, *quetzal mizquitl* or mesquite; north—Tlaltecuhltli, Tlazolteotl, *quetzal pochotl* or ceiba; west—Cinteotl, Tezcatlipoca, *quetzal huehuetl* or cypress (mistakenly translated by the annotator as *cedro* or cedar); south—Malinalteotl, Macuiltonal, *quetzal hexcotl* or willow. The *quetzal* adjective may translate as “precious.” Tudela de la Orden (1980:190, 313, 314); Mönnich (1982).
 23. Although only three of the interrupting day names (5 Lizard on the right, 5 Rabbit in the center, and 5 Flower on the left) have been preserved, they establish the pattern.
 24. The Coixtlahuaca documents include the Lienzo de Tequixtepec, Codex Gómez de Orozco, Lienzo de Tlapiltepec, and Codex Porfirio Díaz. Lehmann (1905, 1966) was the first to identify some of the place signs in Mixtec codices; Nowotny (1961:227–228, Plate 51, 2005:160–161, 244–246) expanded on his work. Jansen (1982a, 1982b, 1:224–277) and Simonin (1989) then located the place signs geographically. See also Anders and Jansen (1988:146–147) and Anders, Jansen, and Pérez Jiménez (1992a:98, 172–173).
 25. Pohl and Byland (1990:121–123) have also correlated these directional signs with prominent landscape features around Tilantongo, which suggests that the people of individual Mixtec towns were situating the directions more locally; see also Byland and Pohl (1994:81–85). Brotherston (1995:147–150) has identified them with still other locations, which he terms “outposts,” and provides a useful comparative chart of the directional signs in a number of codices.
 26. Sahagún (1953–1982, bk. 1:31–32, 64, bk. 2:189, 244, bk. 9:88, 1993: Pal. Real 269r, 365v, 1997:109, 120). Anders, Jansen, Reyes García (1993:251–253) review these associations. They (p. 252) also identify the Macuiltonaleque with deceased warriors, parallel to the women who died in childbirth. Both were companions of the sun: the deceased warriors from sunrise to noon, and the Cihuateteo from noon to sunset (Sahagún 1953–1982, bk. 6:162–163). Indeed, the warrior costuming in Aubin No. 20 supports this identification, although none of the chroniclers specifically equates the Macuiltonaleque with warriors who have died in battle or on the sacrificial stone. Spies were sacrificed in the temple of Macuicalli (5 House) and Macuilquiauhtl (5 Rain), and captives were slain in the temple of Macuiclipactli (5 Crocodile), according to Sahagún (1953–1982, bk. 2:180, 184); however, captives were also sacrificed in most temples. Nicholson (1971b: 417–418) has characterized the Macuiltonaleque as having a “solar nature,” perhaps because Macuixochitl and Macuilotochtli carry what are called a “sun shield” and a “sun baton” in Sahagún’s pictorial representations, but the chroniclers do not otherwise mention solar aspects. See also Mönnich (1973). More recently Pohl (1998:195–197, 200, 2003b:204) has described the Macuiltonaleque as patrons of the court diviners and consorts of the Cihuateteo, who together belong to that category of malevolent avatars called Tzitzimime.
 27. The cells on Borgia 47 that precede these *trecenas* of the Cihuateteo and Macuiltonaleque function as prefixes to the almanac proper. The cell to the right of the Cihuateteo shows four centipedes, three serpents, and a Cihuateteo bursting forth from a great cauldron. Five day names, each with the coefficient 13, mark the days preceding the beginning days of the *trecenas* that follow. The cell to the right of the Macuiltonaleque likewise features the birth of serpents and a Macuiltonalequi; the five day names in that cell have the coefficient 4, and they precede the day names of the Macuiltonaleque that follow; see Selser (1963, 2:63–64). Although Anders, Jansen, and Reyes García (1993:244–245) associate these cells with the ritual section of 29–46, the cells share the orientation and structural organization of the almanacs and thus belong with them.
 28. See Selser (1963, 2:85–103); Anders, Jansen, and Reyes García (1993:261–277); Hernández and Bricker (2004: 299–320); and Hernández (2004).
 29. A passage in the Codex Vaticanus A/Ríos (11rv) describes a directional almanac similarly organized according to the *trecenas* and employing *trecena* signs and spacers. The author does not elaborate on the properties of each direction except to name the direction, give its Nahuatl name and meaning, and list the signs associated with it; he conflates south with noon and north with midnight. The almanac he describes must have been graphically structured as a roughly circular diagram (like Fejérváry-Mayer 1) rather than a compressed table (like Borgia 49b–53b), for the author misread the directions in the reverse order as east, south/noon, west, and north/midnight (which disrupted the sequence of the *trecenas*), rather than the correct east, north, west, and south (which would have preserved the *trecena* sequence). Kingsborough (1831–1848, 5:173–174, 6:196–197); Corona Núñez (1964–1967, 3:40–43).
 30. The Dover edition (Díaz and Rodgers 1993) errone-

- ously pictures Water and Dog, although Kingsborough's (1831–1848, 3:pl. 62) reproduction shows the images (then still understandable) of Rabbit facing left and Eagle facing right (noted by Nowotny 1961:230, 2005:248). The days 1 Eagle and 1 Rabbit begin the nineteenth and twentieth *trecenas*, respectively. The Dover edition also lacks one of the twelve spacers on p. 52.
31. See Seler (1901–1902:5–31, 1902–1903:76–81), Tudela de la Orden (1980:165–190), Anders and Jansen (1993:205–207), and Anders, Jansen, and Pérez Jiménez (1994:149–184).
 32. The supernaturals are Tonatiuh, Mixcoatl (?), Tlazolteotl, and Tlaloc (Anders and Jansen 1993:209); Seler (1902–1903:79, 1963, 2:88) identifies the second (north) as Mictlantecuhtli.
 33. See Seler (1901–1902:171–180), Anders, Jansen, and Pérez Jiménez (1994:273–276), and Anders, Jansen, and van der Loo (1994:257–265).
 34. Anders, Jansen, and Reyes García (1993:263) suggest that they represent conflicts between animal *nauales* or alter-egos. Seler (1901–1902:195–203, 1902–1903:112–127) erroneously described them all as forms of the planet Venus. See also Anders and Jansen (1993:223–226) and Anders, Jansen, and Pérez Jiménez (1994:307–310). Hernández and Bricker (2004:299–302, 311) have recently proposed that the scene of a crocodile biting off the foot of Tlahuizcalpantecuhtli on Borgia 51 (west) refers to the specific Venus event on March 31, 1483, when Venus last appeared as evening star at sunset before it disappeared for five days at inferior conjunction. This proposal fits the Borgia imagery well and may explain why the Borgia pictures Tlahuizcalpantecuhtli rather than the sun god seen in the Fejérváry-Mayer and Vaticanus B. Hernández and Bricker do not likewise tie the other animal scenes to real-time events.
 35. The females lack the Cihuateteo's usual death imagery, however, and instead wear Tlazolteotl's headdress and ear ornaments of unspun cotton, U-shaped nose piece, skirt with U-shaped decoration, and pointed shell pectoral. Since Tlazolteotl is goddess of childbirth, these females may represent all women who do battle by bringing children into the world, not only those who died in the process. Taube (1993:10–12) read these as figures of “divine castigation,” similar to the Tzitzimime who appear on the Bilimek Pulque Vessel.
 36. Hernández (2004:338–342, 357) suggests that the fire drilling may be related to “calendrical renewal celebrations” for the years named in each panel.
 37. Although Seler (1963, 2:95) identified these figures as ball players because they hold what he identified as rubber balls, Nowotny (1961:232, 2005:250–251) correctly read them as day names. Nowotny also suggested that two of the Crocodile's disks (west) are painted in miniature on the upturned casket. Oddly, these days with the coefficient of 4 do not occur within the *trecenas* indicated below their mantic cells; instead they occur with one of the *trecenas* associated with the previous cell.
 38. The first date is clearly attached to its throne by a line, which means that any interpretation of the year dates must take the thrones into account. Seler (1901–1902:178–180, 1963, 2:102–103), however, considered the year dates by themselves and suggested that they signal when ten days should be added to bring the 365-day civil year in alignment with the true solar year; most subsequent evidence disproves such a leap year correlation (Caso 1959b, 1967:41–85, 1971). Hernández (2004:338–358, 2006:141) has also read the years independently of their thrones.
 39. Anders, Jansen, and Reyes García (1993:279–284) and Taube (1993:9–14) read the signs below the sky bearers as year bearer signs (Reed, House, Flint, Rabbit) and suggest that this upper almanac presents the sky bearers and singers for the year signs. Hernández (2006:134–141) links the almanac to a series of Venus events in the late fifteenth century.
 40. See Mönnich (1982), Jansen (1986), and Anders, Jansen, and Reyes García (1993:365–372).
 41. Tudela de la Orden (1980:304–307), Cervantes de Salazar (1971, 1:143–144); see Boone (1983:3–6) for Cervantes de Salazar's connection with the Tudela prototype. The painted Tudela almanac is not a compressed table as is the Borgia; instead, it presents the 260 days as a straight list punctuated four times by a cosmic tree and two lords; this groups five consecutive *trecenas* under each pair of gods and tree, as in Fejérváry-Mayer 1. But Spanish glosses added to the first group of five *trecenas* (98v–103r) assign the different gods to groups of seven and six days, as they are in the Borgia (75–76): the Tudela's Spanish text (94v–97v; Tudela de la Orden 1980:304–309) describes a compressed table almanac like the Borgia, rather than the punctuated list almanac that the artist actually painted.
 42. Jansen (1986:104–106); Anders and Jansen (1994:231–244).
 43. The gods are Xochipilli and Tlazolteotl (she has a crossroads behind her), Tonatiuh and Ixquimilli, Tlaloc and a Mictlantecuhtli-monkey pair, and Centeotl and Mayahuel.
 44. Jansen (1986:106); Anders and Jansen (1994:271–275).
 45. See Anders, Jansen, and Pérez Jiménez (1994:281–286) and Anders, Jansen, and Reyes García (1993:305–308).
 46. One can reconstruct the coefficients of the day signs in each group. Those below the first mantic cell all have the

- coefficient 1, and those beneath the second cell have the coefficient 9; the third group is 4, the fourth is 12, the fifth is 7, and the sixth is 5. A diviner looking for the fate of a day 2 Flower, for example, would know that this day comes two days after 12 Movement, which is found beneath the fourth mantic scene; that auspicious marriage is governed by the water gods.
47. A set of almanacs that are cognate with each other (Fejérváry-Mayer 23b–25b, Vaticanus B 9a–11a, Porfirio Díaz Reverse 39–35) distributes six pairs over forty days as a grouped list. Anders, Jansen, and their co-authors refer to them as the six conversations (Anders and Jansen 1993: 185–189; Anders and Jansen 1994: 283–288; Anders, Jansen, and Pérez Jiménez 1994: 237–240). This almanac probably does not offer marriage auguries, because its pairs are not uniformly male and female. The Fejérváry-Mayer and Vaticanus B versions employ spacers and allot no days to the final scene. The Porfirio Díaz Reverse version omits the final scene.
 48. See Nowotny (1961: 218, 2005: 234–235), Anders and Jansen (1993: 247–256, 1994: 171–173), and Anders, Jansen, and Reyes García (1993: 309–322).
 49. Discussed in Anders and Jansen (1993: 82, 1994: 171–173).
 50. The Laud painter inadvertently omitted one of the disks, painting only twenty-three.
 51. See Anders and Jansen (1993: 239–246, 1994: 247–260) and Anders, Jansen, and Reyes García (1993: 109–115), who were the first since Fabrega (1899: 94) to recognize all four sections as a birth almanac. Seler (1901–1902: 87–121, 1902–1903: 190–210, 1963, 1: 179–206) characteristically assigned it an astral/Venusian interpretation; and Hagar's (1911) reading was equally astral, for he read the scenes as ritual acts involving children according to supposed zodiac signs and the four seasons. Nowotny (1961: 208, 1976: 24, 2005: 218–219) and Byland (1993: xix–xx) described the almanac but did not venture an interpretation. See Eberl (2002) for a fuller discussion of birth almanacs and practices.
 52. Codex Madrid (95d–96d, 97b–98b, 99d); see León-Portilla (1985: 76).
 53. Sahagún (1953–1982, bk. 6: 202). Anderson and Dibble translated *otipitzalco* as “thou wert cast,” but Furst (1995: 64) follows López Austin (1988, 1: 208–209) in reading *pitz(a)* as “to breathe.”
 54. In the Fejérváry-Mayer (24a), the first of the presentational scenes shows Centeotl manipulating the infant's umbilical cord rather than holding the child aloft; this seems to be a simple error on the artist's part.
 55. See Anders, Jansen, and Pérez Jiménez (1994: 265–271, 287–290, 303–305) and Anders, Jansen, and Reyes García (1993: 297–300). In the Laud (17–22), a six-page scene involves twenty-two figures who are moving toward a cave where offerings are made. Anders and Jansen (1994: 245–254) relate this to the travel almanacs and seek to find the Fejérváry-Mayer travelers in the Laud grouping. I consider the scene separately as a ceremony involving many parties (as discussed in Chapter 6), more closely akin to ceremonial gatherings like those in the Zouche-Nuttall (54–68) and Bodley (32–31) than to the traveler almanacs.
 56. Garibay (1979: 131); Acosta (1979: 232); see discussion in Anders, Jansen, and Pérez Jiménez (1994: 287–288).
 57. Hernández (2004: 352–354) has assigned the coefficient 5 to all of these day signs in an attempt to tie the almanac to the directional almanac on Borgia 49b–53b.
 58. Aveni (1999) additionally has proposed that the almanac on Borgia 25 records Venus events, which he relates, along with Borgia 27 and 28, to the known Venus almanacs on Borgia 53–54. Bricker (2001) has offered a slightly different reading for Borgia 25, arguing that it and Borgia 24 are date-reaching mechanisms for Venus phenomena. Hernández (2006: 132–134), building on Bricker's proposal, has attempted to identify Venus imagery in these rain almanacs.
 59. See Anders and Jansen (1993: 291–297) and Anders, Jansen, and Reyes García (1993: 167–174).
 60. See Córdova (1987: 201–203), mentioned by Seler (1902–1903: 280, 1963, 1: 258) and discussed by Anders and Jansen (1993: 292).
 61. These day and year signs reappear with coefficients of 4 on the directional almanac on Borgia 49b–53b, where the eastern *trecenas* have 4 Monkey and y4 House; the north has 4 Vulture and y4 Rabbit; west has 4 Crocodile and y4 Reed; and south has 4 Death and y4 Flint (Anders and Jansen 1994: 291). These days and years likewise divide the *tonalpohualli* and 52-year cycle into quarters.
 62. This headdress features a “trapeze-ray” element, which also appears partially obscured on the headdresses of three of the other rain gods on p. 27, as well as several other rain gods in the Borgia (14?, 16?, 37, 38). Toci-Chicomecoatl wears it in her headdress in the Borbonicus (30, 31). The motif is old, appearing in the headdress of goggle-eyed figures at least as far back as the Classic period in Teotihuacan, and it was one of the Teotihuacan motifs that was carried to the Maya region. Although it is often called a year sign, because it resembles the Mixtec AO year designation, there is no evidence that the two are the same. See Heyden (1977); Taube (2000: 274–281).
 63. See Hernández (2004: 334) for a comparison of the different reconstructions.
 64. Aveni, in a personal communication (2004), revised the dates he originally proposed in 1999 in order to accom-

modate the seasonal patterning that Hernández (n.d.) felt was important. See also Bricker (2001) and Hernández and Bricker (2004).

65. Aveni (1999, personal communications 2004, 2005). Aveni uses Julian dates, as I do here; to convert to the Gregorian calendar used by Hernández, simply add nine. Closs, Aveni, and Crowley (1984) and Šprajc (1993a, 1993b, 1996) have argued that the Maya recognized a relation between Venus, rain, and maize agriculture, which the Maya used to develop weather and maize crop predictions.
66. Seler (1898, 1904a); Sahagún (1953–1982, bk. 7:11). For explanations of the almanacs, see Nowotny (1961:237–240), Anders and Jansen (1993:329–338), Anders, Jansen, and Reyes García (1993:289–295), and Anders, Jansen, and van der Loo (1994:237–256).
67. The actions of Venus may have led the Mexicans to link it cognitively with the sun. In the Mixtec Codex Selden, Venus and the sun appear personified as companions in arms: on the first page of the Selden, Lord 1 Death (sun god) and Lord 1 Movement (Venus) descend together to spear the earth open in order to release the original ancestor of the Jaltepec dynasty.

6. Protocols for Rituals

1. See Quiñones Keber (1987) for a discussion of the ritual content of the Borbonicus *tonalamatl*.
2. The act of “eating the earth,” by touching the ground and then putting the finger to the mouth, was common upon entering temples and before cult images; see Sahagún (1953–1982, bk. 2:195).
3. Half-page protocols are on Fejérváry-Mayer 17–20, 22, 43; the protocols on Laud 25 and 26 seem to have a top and a bottom register.
4. Bar and dot numbers are employed in calendrical inscriptions at Monte Alban as early as Stelae 12 and 13 and continue on relief carvings there and at such sites as Huajuapán, Tequixtepec, and Cuilapan into the Postclassic (see Paddock 1966:figs. 36, 143–149, 180, 209–223, 226, 230, 285). Even after the conquest, the dedication stone for the unfinished monastery at Cuilapan used bars and dots plus day and year signs to date the open chapel (illustrated in Paddock 1966:374).
5. See the discussion in van der Loo (1982:323, 1989:31–32).
6. See Anders, Jansen, and van der Loo (1994:267–287) and van der Loo (1982, 1987, 1989) for rituals for healing, rain, and the hunt; Dehouve (2001) for new leaders; Oettinger (1979) and Oettinger and Oettinger (1975) for marriage; and Lipp (1985) for the dead. Lipp (1991:72–

116) discusses a full range of Mixe rituals. This paragraph draws on these ethnographies and on Schultze Jena (1933–1938, 3:140–151) and Nowotny (1961:272–275, 2005:302–306).

7. For these rituals involving paper figures, see Anders and Jansen (1986), Anders, Jansen, and Pérez Jiménez (1994:196–198), Anders, Jansen, and van der Loo (1994:292–296), Galinier (1987), Ichon (1973), Lenz (1948, 1984), Sandstrom (1991:303), Sandstrom and Sandstrom (1986), and Williams García (1963).
8. It was the fifth cup of pulque that inebriated Quetzalcoat at Tula (Codex Chimalpopoca 1992:34).
9. The number also appears in the *Historia de los Mexicanos por sus pinturas* (1979:34), which records that, shortly after the sun was created, Tezcatlipoca created 400 men and 5 women in order to have some humans for the sun to eat. Of course, the number 400, in and of itself, carries the metaphorical meaning of innumerable; for example, Huitzilopochtli slew 400 brothers (the Centzonuitznaua) (Sahagún 1953–1982, bk. 3:1–5), and 400 Mimixcoa led the Chichimecs out of Chicomoztoc according to the *Anales de Cuauhtitlan* (Codex Chimalpopoca 1992:23).
10. See Laurencich Minelli (1992:116–117), Anders, Jansen, and van der Loo (1994:301–312), Anders, Jansen, and Pérez Jiménez (1994:198–201), and van der Loo (1994).
11. Although Anders, Jansen, and Pérez Jiménez (1994:220–221) identify both these animals as dogs, they lack the concavely chewed ear and prominent eyebrow of dogs elsewhere in the codex (e.g., pp. 31, 41). Instead they are more similar to the rat on p. 36 and the raccoon on p. 34 (but without the eye-stripe).
12. Anders and Jansen (1994:216) identify these items as the smoke and ash of tobacco, a cut tongue, and an ornament of flowers. For the serpentine offerings found in the Templo Mayor excavations, see López Luján (1993:256).
13. A related protocol dedicated to Chalchiuhtlicue on Fejérváry-Mayer 8 is dated 1 Water, 1 Lizard, and 1 Crocodile. It also features water being poured over a fire and includes the flower or paper panache as one of the counted offerings.

7. The Cosmogony in the Codex Borgia

1. For example, a few panels of the *veintena* section in the Codex Borbonicus (27 left, 30–33, 35) are oriented vertically, with the bottom of the scene along the left side of the screenfold page. The Selden Roll, a foundation history from the Coixtlahuaca Valley, opens with a vertical orientation: the left side of the roll is the top of the scene,

where the primordial gods sit in a layered heaven and a supernatural descends through Chicomoztoc below. The Selden Roll, with its ample space and lack of registers or dividing lines, then shifts effortlessly to a horizontal left-to-right orientation and reading order. Codices that have a vertical orientation throughout are relatively uncommon in the Mesoamerican corpus, although two notable ones are the Codex Selden (a screenfold) and the Codex Tulane (a roll), both of which are early colonial genealogical histories from the Mixteca, painted on hide; they read from bottom to top rather than top to bottom, just the opposite of the Borgia order (Smith 1994; Smith and Parmenter 1991).

2. But see Just (2004), who explains how sections of the Codex Madrid seem to be organized in order to allow the reader to make the transition from the material on one side of the manuscript to the material on the other.
3. The ninth rite, according to Anders, Jansen, and Reyes García (1993:244–245), is the emergence of the Macuiltonaleque and Cihuateteo in two panels on p. 47. All other scholars, including me, omit these panels on p. 47 from the narrative section, because they revert to the horizontal orientation of the almanacs and relate directly to the two almanacs that immediately follow them on 47–48 (and share the same registration).
4. Byland and Pohl (1994:156–162) have suggested parallels between the episodes on pp. 39–42 and the story of Lord 8 Deer, specifically 8 Deer's journey to the sun god. Pohl (1998:186–189) rightly associated the parturient flint in the flinted enclosure on p. 32 with a mural and movable feast at Ocotelolco in Tlaxcala, which celebrate a creation story whereby gods are born from a flint or transformed into one. Taube (1986:62–65) analyzed the ritual on 37–38 as portraying the emergence of humankind and suggested that the architectural features are related to those at Cempoalla; elsewhere he also proposed that pages 36–38 show the origin of music (Taube 2001:102–103). Milbrath (1988:160–163) has discussed the birth imagery in the passage.
5. Milbrath (1988) discusses birth imagery in central Mexican art.
6. Red frame lines appear only on 39–40, where they articulate the cells of the day signs bordering the Cipactli skin. On these pages the red frame lines function as they do in the almanacs.
7. These strip goddesses have been variously identified as sky bands (Seler 1963, 2:41); death goddesses (Seler 1963, 2:18, 48); and earth goddesses (Seler 1963, 2:48), manifested as Tlazolteotl, “a skeletal earth goddess” (Byland 1993:xxiv–xxvi), or as Cihuacoatl (Anders, Jansen, and Reyes García 1993:202, 222–241). Nowotny (1961:245–246, 2005:266–267) presented the earth and sky options but did not favor one over the other. Milbrath (1988:161) called them “birth goddesses” and suggested that the strip goddess on p. 32 was Chimalman, the deceased mother of Quetzalcoatl; she also read them as representing the Milky Way, through which Venus passes (Milbrath 1988:162–163, 1989:116–117, 1999:275–277). More recently, Klein (2000:5–8, 10–11) has argued that platforms bearing skulls, crossed bones, flints, and/or stars were conceptualized as the skirts of female Tzitzimime, which raised the possibility of viewing these strip goddesses as actual physical structures within the built environment as well as organizational ones in this narrative.
8. The red depicts cut flesh, and the wavy yellow represents the fatty layer where the flesh has pulled away. See the severed limbs of the Coyolxauhqui relief, for comparison.
9. Although Milbrath (1988:161–163) interpreted this as a birth act, I do not see it as such because there are no umbilical cords or clear wombs, the cut comes in the middle of the long torso and extends fully through the body, and some moving figures pass through the strip goddesses several times.
10. Scholars have debated whether they represent different beings or slightly different guises of the same entity. Seler (1963, 2:9–61) and Nowotny (1961:245–256, 2005:265–279) identified most of them as Quetzalcoatl. Byland (1993:xxiv–xxvi) and Anders, Jansen, and Reyes García (1993:191–245) separated them as several different individuals and proposed that they are priests (rather than deities *per se*), who emerge through the opening in the strip goddesses to initiate the rituals that follow.
11. Byland (1993:xxiv) identified this Quetzalcoatl as Smoke Eye because of the smoke puffs behind his eye. The smoking eye, however, is a feature also shared by the Quetzalcoatl who has tricolored face paint (e.g., 25, 32, 45, 46, 62) and by several other black-faced beings within the narrative and in the Borgia's almanacs, including Tlaloc (14, 20, 25, 28, 38, 57, 67), Ehecatl (19), Ixtlilton (62), personified plants (30), and the obsidian spirits who emerge from the open bundle (36, 37). The smoke puffs or scrolls seem to represent a quality shared by these gods.
12. Seler (1963, 2:30) identified him as Quetzalcoatl. Byland (1993:xxiv) and Byland and Pohl (1994:157–159) described Stripe Eye as a ruler and priest. Anders, Jansen, and Reyes García (1993:214) identified him as a priest of Xolotl, the canine twin or companion of Quetzalcoatl, because Xolotl occasionally has a vertical stripe through his eye.
13. For example, Lord 9 Wind, the Mixtec equivalent of Quetzalcoatl (see Caso 1977–1979, 1:60–64; Nicholson 1978, 2001:145–148), appears in the Codex Vienna (50–47) and Codex Zouche-Nuttall (38) with a black stripe down his face, as do many other males who otherwise

- have Quetzalcoatl's distinctive tricolored face paint and beard in the Zouche-Nuttall (e.g., 49, 66, 68, 70, 75, 80). For the Aztec Quetzalcoatl with a stripe, see Durán (1971:130).
14. Seler (1963, 2:40, 41, 45, 48) identified these males as Tonacatecuhtli/Chalchiuhtlatonac, Tepeyollotl, Chalchiuhtlatonac, and Tepeyollotl; Anders, Jansen, and Reyes García (1993:221, 222, 227, 232) named them all Tepeyollotl.
 15. See Sahagún (1953–1982, bk. 6:34, 254), Garibay (1979:23–24), León-Portilla (1963:91–92), Lupo (1999:235), and Olivier (2003:23, 274).
 16. The spikes on the exterior of the ball point to a sharp substance like obsidian, rather than rubber.
 17. I thank Robert Bye and Edelmira Linares (personal communication, 2004) for pointing out the characteristics of copal. See also Hernández (1959, 1:181–182), Martínez (1959:176–180; 1979, 1:272–273), Morton (1981:394–395), and Aguilera (1985:127). Anders, Jansen, and Reyes García (1993:192) read it as a palm, and Seler (1963, 2:10) simply as a tree in flower.
 18. Seler (1963, 2:22) identified the Tlazolteotl-spiders that hang on the cord on p. 34 as Tzitzimime, creatures who figure in early Aztec cosmogonies (e.g., Garibay 1979:107; Bierhorst 1992:149).
 19. See Boone (n.d.a) for a slightly expanded and more fully illustrated version of this argument.
 20. Seler (1963, 2:14); Anders, Jansen, and Reyes García (1993:196); cf. Borgia 56.
 21. Van der Loo (1987:fig. 46). Cf. Vaticanus B 72; Vienna 52, 44, 43, 41, 31, 27, 25, 24, 22, 18, 17.
 22. Seler (1963, 2:11); Anders, Jansen, and Reyes García (1993:196).
 23. The almanacs are on Borgia 15–16, Vaticanus B 33–35, and Fejérváry-Mayer 23–24. Eberl (2002) discusses these birth almanacs.
 24. Anders, Jansen, and Reyes García (1993:110); see also López Austin (1988, 1:208–209).
 25. Seler (1963, 2:14) identified them as a tree in flower, the maguey, perhaps a cotton plant, and a tree with round fruits. Anders, Jansen, and Reyes García (1993:196) identified them as a palm, a maguey, a *pochote* (ceiba), and a fruit tree. The probable copal tree has the secondary growth at the base of its trunk and leaves/flowers at the ends of its branches (Robert Bye and Edelmira Linares, personal communication, 2004). Bye and Linares also identified the fourth tree as a calabash (*Crescentia cujete*) because of the large round fruits coming off side branches.
 26. Coroña Núñez (1964–1967, 3:10–11). The Vaticanus A/Ríos painter represented these three underworld layers as a set of twin hills, each topped by a flint with a man pushing them apart; a single hill studded with flints; and a configuration of curls (wind) punctuated with flints. The Nahuatl and Italian glosses name them “tepetli monanamyecia” or “mountains that are joined”; “Iztepetl” or “Obsidian Mountain”; and “Yee hecaya” (Itzteecayan), translated by Coroña Núñez (1964–1967, 3:10) as “where blows the wind of razors [or knives].” See Boone (n.d.a).
 27. The trophy heads held by the flint warriors and eagle warriors have white disks painted in short rows below the severed necks. There are four disks with each of the heads held by the eagle warriors (left and right), five disks with the heads held by the white flint (top), and six with the heads held by the red flint (bottom). Anders, Jansen, and Reyes García (1993:202) read the disks as signifying quantities of heads, but their meaning is unclear.
 28. Olivier (2003:271) has argued that Ehecatl and Huitzilopochtli should not be identified as differently colored Tezcatlipocas.
 29. Byland and Pohl (1994:76–77, 156–159) have noticed parallels between the Black Temple and a round Wind Temple that is bordered by an undulating serpent in the Mixtec genealogical histories (e.g., Zouche-Nuttall 15, 17). Furst (1986) called this the Temple of the Ascending Serpent. The Borgia serpents have their heads downward, however. See also Anders, Jansen, and Reyes García (1993:209–210), who also note similarities between the subsequent episode of the sacred bundle and the manipulation of sacred bundles in the Mixtec histories.
 30. Although Anders, Jansen, and Reyes García (1993:204) called them spirits of fire, Seler (1963, 2:22) identified them as “*huelhueteteo*, the ‘ancient gods,’ the first men.” By this he may have meant the 400 men who, according to the *Historia de los Mexicanos por sus pinturas* (Garibay 1979:34), were created by Tezcatlipoca in order to feed the sun; these deceased men, who were of five colors (yellow, black, white, blue, and red), were said to occupy the third level of the heavens (Garibay 1979:69).
 31. West, the land of females, is also suggested for the Red Temple by the spiders of Tlazolteotl that descend from its white cord and the female death spirits who receive the heart sacrifice.
 32. Anders, Jansen, and Reyes García (1993:204) read this figure as “dios palma” because of the plant on his back; but Seler (1963, 2:27) identified him as Tonacatecuhtli, and indeed he has features similar to those of the Tonacatecuhtli on the next page, from whom the sun is drilled.
 33. Sahagún (1953–1982, bk. 7:8) relates that Xolotl transformed himself into plants and animals that are doubled or have *xolotl* in their names. The passage has the character of a “just so” story that pertains less to Xolotl’s relation to the sun than to the origin of these names.

34. See Stenzel (1970) and Gutiérrez Solana (1986) for the importance of sacred bundles as repositories of cultic power.
35. The paper streamers (upper right) have black designs on them and are adorned with down balls (Anders, Jansen, and Reyes García 1993:214).
36. See Graulich (1997:109) for a good English summary and discussion of creation legends.
37. Mendieta (1971) ascribes the story to a lost work (the *Tratado*) of Andrés de Olmos. Torquemada (1975–1983, 2:120–121) includes the same story, derived almost word for word from Mendieta.
38. The *Leyenda* names these Cemecatli (1 Reed), Tezcatlipoca, and Chiconahui Ehecatl (9 Wind); note that 1 Reed is Quetzalcoatli's birth name among the Aztecs, and 9 Wind is his birth name among the Mixtecs.
39. The architectural and structural features in this space lack the dark borders and star signs of the night/underworld realm presided over by Yoaltecutli. Star signs appear only on the Red Temple of Heaven and around the four colored circles backing the lightning spirits.
40. Seler (1963, 2:34) identified the male as Xochipilli and said that he has a serpent coming out of his mouth and a precious box sitting in front of him. Anders, Jansen, and Reyes García (1993:216), however, read the figure as a solar musician blowing a flute and beating a precious drum, as did Taube (2001:114–115), who read the scene as the origin of music. Indeed, the *Histoire du Mexique* (Garibay 1979:111–112) records that Tezcatlipoca ordered the wind to seek musicians in the house of the sun and bring them to earth in order to celebrate him. See also Mendieta (1971:80–81) and Olivier (2003:13, 218).
41. Seler (1963, 2:34) identifies this figure as Tlaloc. He clearly wears a Tlaloc headdress here and holds up a rain-sprinkler, but here and at the bottom of p. 38 (where he also appears) he lacks the fangs and curling nose-piece that are so diagnostic of Tlaloc in the Borgia (compare with 12, 14, 16, 20, 25, 27–28, 57, 67); thus I identify him as a Tlaloque, a manifestation of the rain being. Anders, Jansen, and Reyes García (1993:217) identify him nicely as “the spirit of the vapor.”
42. The *abuehuete* is identified by the kettle drum (*huehuetl*) wrapped around its thick trunk.
43. Byland and Pohl (1994:119–121), who cite Mark King (personal communication), and Bellas (1997:126–127, 146). Jansen (1990:105) suggests that the ritual may have served to strengthen 8 Wind and his alter ego, the eagle.
44. The upper body of the male is on the left, and his clawed feet are on the lower right; the upper body of the female is on the right, while her blue feet are on the lower left. Seler (1963, 2:40), who interpreted the red jeweled square as water, identified him as Tonacatecutli/Chalchiuhtlatonac and her as Chalchiuhtlicue. Anders, Jansen, and Reyes García (1993:221) read the figures as Tepeyollotl and Chalchiuhtlicue. Chalchiuhtlicue is the goddess who faces this same male when he appears on p. 41, except that the male there lacks the snaggletooth and crocodile head and claws. As Seler (1963, 2:40) notes, the male creator on p. 38 has the long feathered headdress (like a Sioux war bonnet) worn by the first creator couple in the Vienna (52).
45. There is no indication that pages are missing from this end; to the contrary, the reverse of p. 38 is blank where it was originally pressed against the hard cover of the codex. Page 39 is the reverse side of page 37.
46. Anders, Jansen, and Reyes García (1993:222) interpret the olla as a drum. It may well be a drum, because its lip is outlined with jaguar pelt markings, suggesting that the olla is covered with a jaguar skin. Speech scrolls and a little jeweled bar emitting from Stripe Eye's mouth signal his song.
47. In addition to two versions of Stripe Eye (one with a hummingbird helmet), there are two obsidian spirits, two black Quetzalcoatl's, Ehecatl, a black Quetzalcoatli with a headdress of two entwined serpents (compare with the Quetzalcoatli on Borgia p. 62), and one who is too badly damaged to be identified.
48. As Milbrath (n.d.) has pointed out, Kingsborough (1831–1848, 3:pls. 75–76), Seler (1963, 3:pls. 39–40), and Díaz and Rodgers (1993:pls. 39–40) omitted the second appearance of Dog (10) between Water (9) and Monkey (11) along the lower border, but its cell is clearly there. I agree with Milbrath in ending the series with Reed (13) rather than Grass (12) as per Seler, Nowotny, and Anders, Jansen, and Reyes García (1993:224); the last Reed is fairly clear. As Milbrath also notes, Díaz and Rodgers mistakenly pictured Rain (19) instead of Water (10) along the lower border and had Rabbit (8) facing backward.
49. Since cycles usually begin with Cipactli, and since we have Cipactonal's head where the count would logically begin, this first set may actually have begun with Crocodile/Cipactonal, just as the sequence on the right side probably did; this would mean that Death is hidden underneath Cipactonal's collar and that Monkey was in the cell at the bend of his arm.
50. Milbrath (n.d.) reads the scene as an eclipse (when the sun is attacked), specifically the eclipse that occurred in central Mexico on August 8, 1496. This is a very intriguing suggestion, except that the sun on Borgia 40 is firmly within the underworld, in the crocodile's body, not in the heavens. Additionally, the date that she uses to establish a 148-day eclipse interval (the disputed Flint date along the

- bottom) is not distinguished from the others in any way, and the 178-day eclipse interval is reachable only by adding two last day signs (4th and 9th signs) under or behind the red rectangle at the bottom center of the frame that seemingly were not drawn by the painter (see Table 13).
51. The women have folds in their stomach, which identifies them as women who have already given birth, not nubile virgins; the licentious woman in the marriage almanac on p. 59 also has such folds. Olivier (2003:211) discusses the female companions assigned to Tezcatlipoca's representative who was destined for sacrifice.
 52. For Lady 1 Eagle, see Caso (1977–1979, 2:338), Furst (1978a:159), Jansen (1982b, 1:26), Byland and Pohl (1994:171–175), and Anders, Jansen, and Pérez Jiménez (1992a:125–126).
 53. Although Seler (1963, 3:pl. 42), Nowotny (1961:251, 2005:273), and Díaz and Rodgers (1993:pl. 42) mistakenly reconstructed this day as Jaguar (14th sign), Anders, Jansen, and Reyes García (1993:230) read it correctly as Rabbit; Kingsborough's (1831–1848, 3:pl. 74) drawing also looks more like Rabbit than Jaguar.
 54. Anders, Jansen, and Reyes García (1993:230) call them animal *nahuals* of evil portent, although the serpent, as a day sign, is generally very auspicious (see, for example, Borgia 11; Sahagún 1953–1982, bk. 4:59).
 55. Seler (1963, 2:45–46) read them as manifestations of Xolotl (god of deformities) in the form of Ahuiateotl (“god of voluptuousness”) and Nanahuatzin (the syphilitic god who became the sun).
 56. This spotted skin may also be jaguar skin, because the arms and legs here have furry white borders, and the spots are rounder and more like jaguar spots than those on p. 40, but the fur edge may simply reflect the sun's identity as a canine Xolotl.
 57. This goddess also has the defleshed jaw, round eye, and clawed hands and feet that characterize so many supernaturals in the narrative passage, including all the strip goddesses and the quadrilaterals and supernatural essences on Borgia 29–31.
 58. Although such multicolored bands symbolize stone in the Mixtec codices (e.g., Vienna 48), in the Aztec codices they symbolize preciousness, fertility, or a similar quality, for the precious, flowing tree that appears as an augury for *trecena* 15 in the Borbonicus and Tonalamatl Aubin has a trunk colored with such bands (the same tree for *trecena* 15 in the Borgia [12] is not banded, however). Seler (1900–1901:14) identified this tree in *trecena* 15 as the sign for Tamoanchan (an ancestral paradise) or “Xochitl icacan” (Where the Flowers Are).
 59. Anders, Jansen, and Reyes García (1993:234–236) followed Nowotny (1961:251–252, 2005:274–275) in relating this to the Toltec ceremony of perforating the nose of a new king. It is unclear, however, whether the artist intended to depict the nose being bitten or more generally the face.
 60. This substance is not pulque, because it is drawn differently than the pulque just below, it has an arrow or reed stuck into it, and it is not contained in a pulque vessel. Seler (1963, 2:58) identified it as eagle down, the substance that was used to coat the face of captured warriors.
 61. Described in Sahagún (1953–1982, bk. 11:110).
 62. The plain, pure white banner is a common symbol of sacrifice. In the Borgia, differently striped banners embellish the enthroned death bundles of deities on p. 26; the banner with the black horizontal stripes is carried by Tezcatlipoca (21), a flinted jaguar (warrior) also embellished with sacrificial cords (70), and an iguana who imperils the crops (20); the banner with the red horizontal stripes is carried by Xipe (24, 25); and the multicolored feathered banner and the round mace are in positions equivalent to sacrificial banners in the directional almanac (compare 49 to 50–52). In the Telleriano-Remensis (2r, 3r), the white feathered banner is attached to Mictlantecutli and Tlazolteotl.
 63. One of the place signs in the Vienna (8) is a jaguar with bloody diarrhea, which ends in a sun disk. Elsewhere in the Vienna (23), the sun disk first rises along a wide red path. On the same page, smaller disks that are half-sun and half-darkness have a path that is half-red and half-tan spotted with red dots, punctuated by stars; this probably refers to a sun that has set. Such red/tan panels depend from suns in the Zouche-Nuttall (21).
 64. E.g., Selden Roll; Zouche-Nuttall 19, 21; Vienna 32, 23, 19, 18, 16, 14, 12, 11, 10. See the discussion of foundation rituals in Boone (2000a).
 65. Although the male on the lower right throne has a descending blue bird on the front of his headdress like Xiuhtecuhtli, he has Quetzalcoatl's tricolored face paint.

8. Provenience

1. Although Caso (1962, 1967:103–112) strongly disagreed with Robertson on the colonial nature of the *tonalamatl* of the Borbonicus, several subsequent scholars have supported Robertson's essential argument (Nowotny 1974:11; Brown 1977; Gutiérrez Solana 1985:138, 148–149), which is generally accepted (e.g., Couch 1985:xi, 2–6). Batalla Rosado (1991–1994) has offered a recent critique and considers all parts of the Borbonicus to be Precolumbian.

2. See also Glass (1975a:91) and Aguilera (1981:12), who notes that Boturini was in Tlaxcala in 1740.
3. Quiñones Keber (1995:132). See also Jansen (1984:77), who first suggested that the Telleriano-Remensis was in the monastery of Santo Domingo in Puebla when Fray Pedro de los Ríos arrived there and later added his own annotations and amendments to the codex; Jansen proposed that Ríos had the Vaticanus A/Ríos made in Puebla (painted by native artists who “corrected” some parts) shortly before his death (before 1565).
4. These supernaturals are not named in the Porfirio Díaz Reverse (41, 33), but they can be identified by their attributes and association with the cardinal directions. Other Mixtec conventions, mentioned by Nicholson (1963:92), include the segmented lines on the face paint of the solar deity (42, 35), seen also in Selden 1, Bodley 33, and a Nochixtlan vessel (Fig. 125); the symbol of a tied double-volute (Porfirio Díaz Reverse 36) that frequently appears in the Vienna in the contexts of feasts (e.g., 35, 32, 30); and distinctive jewelry and headdress elements.
5. See also López de la Rosa and Rocha Segura (1997), who suggested that ceramic types in the Borgia Group codices are temporally deep.
6. Robertson’s Mixtec attribution was followed by Ramsey (1982:42) and somewhat by Paddock (1985). Pursuing a psychological argument, Paddock (1985:371) contended that because “the Borgia painter *maximizes* depictions of blood, whereas the painters of almost all the others *minimize* them,” the codex must have been painted by a Mixtec master in service of a Nahua high priest. Paddock (1985:378) saw the Borgia style as Mixtec but the iconography and bloodiness as Nahua and suggested that it came from the valley of Puebla, where Nahuas had invaded and pushed out the Mixtecs.
7. Nicholson (1963:69; 1966:153), illustrated in Caso (1967:161–163, 169, 178, 183).
8. Anders, Jansen, van der Loo (1994:91). For the importance of *yī Reed dī Crocodile* as a metaphor, see Furst (1978b).
9. Lords 4 Serpent and 7 Serpent appear in Vienna 51, 33, 30, 5, and 2, and Zouche-Nuttall 3, 4, 6. Nicholson (1963:69); Jansen (1978:114); Sisson (1983:655).
10. Lord 9 Movement (Bird-Bill Mouth) appears in Zouche-Nuttall 6, in Vienna 29, and on a carved bone from Tomb 7 at Monte Alban (Caso 1932:506; Nicholson 1963:68).
11. Dennis (1994) also proposed that an aged couple, priests, nude figures, and serpents—all unnamed—in the Borgia (37–38) have Mixtec identities, but I find the resemblances too general.
12. Nowotny (1961:210, pl. 38b, 2005:134–135, 222); Nicholson (1963); Jansen (1978:114). For *nūhu*, see Rabin (1979:178), Smith (1973b:65–71, 1983:240), and Jansen (1982b, 1:295–308).
13. Discussed by Sisson (1983:655). A proposed *nūhu* on Borgia 38 (ibid.) is unsupported.
14. Nicholson (1963:33); Jansen (1978:113); Caso (1977–1979, 2:294). Lord 4 Jaguar is the priest/supernatural of “Tollan” who pierced the nose of Lords 8 Deer and 4 Wind during the ceremonies that conferred on them the title and status of “tecuhtli” or lineage head (see Byland and Pohl 1994:138–149; Pohl 1994:21–22).
15. Pohl (1994:21–22) identified the men with leafy head-dresses as Chochos. Chochos or Popolocas occupied southern Puebla and northern Oaxaca, especially the Coixtlahuaca valley, in the sixteenth century (Caso 1977–1979, 1:118; see also Byland and Pohl 1994:146, 150). Anders, Jansen, and Pérez Jiménez (1992b:114) suggested the mountains might be Mount Tlaloc and Matlalcueye (La Malinche) and that the men with leafy headdresses are personified plants rather than Chochos; four similar snow-capped mountains are included in the list of places in Vienna 39.
16. These appear on Borgia 47–48 and Vaticanus B 77–79; see also possible day names on Borgia 49–52.
17. Nicholson (1963:69) notes that the sun may have been named 4 Reed rather than 4 Movement in the Tehuacan-Cozcatlan-Teotitlan area.
18. Compare the segmented arcs in Selden 1, Bodley 33, 34, the Nochixtlan vase (Fig. 125), Porfirio Díaz Reverse 35, 41, 42, Vaticanus B 95; the vertical line in Zouche-Nuttall 79, Vienna 25, 23; the yellow face with a red arc in Cospi 12; and the yellow-red faces with red arcs in Borgia 14, 16, 55, 57, 66, 70.
19. Compare the “Mixtec” Venus (Bodley 10, 38; Selden 1; Fejérváry-Mayer 13, 25; Laud 24; Vaticanus B 37, 80–84) to the “Aztec” Venus (Borbonicus 9; Borgia 16, 19, 45, 53–54; Cospi 9–10; Telleriano-Remensis 14v). Nicholson (1963:69) mentions differences between the representations of other gods in the Borgia and Mixtec manuscripts.
20. Jansen (1978:114), reported by Sisson (1983:655), Anders, Jansen, and van der Loo (1994:82–83), Dennis (1994), and Byland and Pohl (1994:156–159).
21. See Sisson (1983:653–654), Nicholson (1963:71–77, 98–99, 1966:153–154, 1994:113–114), and Nicholson and Quiñones Keber (1994:xii).
22. Noguera (1929) additionally argued for these similarities. See also Nowotny (1961:15, 201, 2005:5–6, 8, 204); Sisson (1983:653–654).
23. For the Ocotelolco murals and *cajete*, see Contreras Martínez (1990, 1992, 1994a, 1994b); Beltrán and Contreras Martínez (1994). Both Tezcatlipoca faces, in the mural and on the plate, have closed eyes, which led Contreras

- Martínez (1994b:13) to infer they are dead; he equated them with the souls of sacrificed warriors. Pohl (1998: 186–188, 196–197) identified the Tezcatlipoca head with the black Macuiltonalequi of Borgia 47 and equated the serpents with Borgia serpents.
24. For Texcoco, see Acuña (1982–1988, 8:54) and Alvarado Tezozomoc (1975:109); for Tlapitzahuayan, see Sahagún (1953–1982, bk. 2:10, 71) and Torquemada (1975–1983, 3:376); for Tlanquizmanalco, see Sahagún (1956, 3:353) and Torquemada (1975–1983, 3:357). As Nicholson (1963:35) also noted, Muñoz Camargo (1998:63, 85, 166) speaks of Tezcatlipoca's importance in Puebla-Tlaxcala.
 25. Bernal (1949:71), who also reported that ceramics from Coixtlahuaca are similar to Mixtec ceramics from the Mixteca Alta; Robertson (1963:156–157); Sisson (1983: 654–655); Pohl (2003b:202).
 26. See Noguera (1954:163, 207), Müller (1978:152), and Urnuéla et al. (1997:63).
 27. Nicholson (1960:615, 1963:13–21, 1966:152, 2000:132); Anawalt (1981:849); León-Portilla (1985:13, 17).
 28. For Tlillan Tlapallan, see Sahagún (1953–1982, bk. 10: 187–192); for the importance of Coatzacoalco, see Nicholson (1963:55, 57, 1966:152–153); see also Anders, Jansen, and van der Loo (1994:46–47).
 29. See also Nicholson (1967:92) and Burland's introduction in Codex Fejérváry-Mayer (1971:13).
 30. Thompson (1966:169–171); Burland (1971:13); León-Portilla (1985:14–15), who also equated the opening of eyes in the Fejérváry-Mayer (23–24) birth almanac with the carving of masks in the Madrid (96–97c). See also Nicholson (1966:155) for a summary and critique.
 31. Bars and dots are found at Cuilapa and Yucunūdahui (van der Loo 1982:232) and in Codex Selden (Boone 2000b:43). See Just (2004) for the derivation of several Madrid almanacs from Borgia Group sources; see López Austin (1993) for possums.
 32. Nicholson (1963:83, 1967:91–92); Thompson (1966: 162–170). León-Portilla (1985:14–15) interpreted many more of the almanacs and most of the protocols in the Fejérváry-Mayer as pertaining to the *pochteca* (specifically the long-distance merchants) and their rituals.
 33. Tlazolteotl is prominent in the almanacs on Laud 39a–43a and, arguably, 25–32. See Nicholson (1963:55–65) and Anawalt (1981), who built on Nicholson's earlier proposal, especially by analyzing clothing patterns in the manuscripts. León-Portilla (1985:94–97) read the day signs Movement, Wind, Deer, and Grass on Fejérváry-Mayer 33a–34a as year bearers, which are different from those on p. 1 and which he said corresponded to those in a region near Tochtepec; since there are no year indicators on 33–34, I read these as day signs. For axes in the Mixteca, see Dahlgren de Jordán (1954:201–203) and Nicholson (1963:88). For parrots, see Fejérváry-Mayer 34a and Laud 15; for the roseate spoonbill, see Laud 13. Granata (1980:324–325), arguing that coral snakes are frequent in the Borgia Group but that Nahuatl lacked an indigenous nomenclature for this particular snake (however, see Sahagún 1953–1982, bk. 11:80), proposed that the distribution of coral snakes and their nomenclature point to a regional origin for the codices among the Chinantec-, Popolocan-, Mixtec-, and Tequistlatecan-speaking peoples; arguing against this is the appearance of coral snakes on the arms of the dismembered Coyolxauhqui at the Templo Mayor. Because of the contextual presence of boa constrictors in the Vaticanus B and in Maya codices, Granata also suggested that the Vaticanus B is the product of a coastal lowland tradition having possible cultural associations with the Maya. This is based on a single trait taken out of its larger context, however. Beyer (1911) argued that a male in the Fejérváry-Mayer (25b) that Seler (1901–1902:131) considered to be Huitzilopochtli was really a version of Tezcatlipoca.
 34. Anders (1975:12–17) saw slightly different stylistic groups: the Borgia near Tizatlan in Cholula-Tlaxcala, the Laud and Fejérváry-Mayer in the west, with the Vaticanus B between them and the Borgia and the Cospi obverse in the Mixteca-Puebla area, because of perceived similarities with the Nochixtlan ceramics.
 35. See Jansen (1978:113–114) and Anders, Jansen, and van der Loo (1994:59–62) for these linguistic and visual expressions. They debunk Seler's (1902–1923, 2:453) proposal that the Crocodile day sign has spines because of the linguistic closeness of Cipactli and *tzinacatl* (Nahuatl for spine) by pointing out that the spiny Crocodile appears in Mixtec codices. Similarly they discount Nowotny's (1976:29) argument that the tree-drum on Borgia 38 referred to the Nahuatl name for the cypress (*ahuehuete*) by noting that “tree-drum” in Mixtec is *yutnu ñuu* (willow).
 36. For a Tlaxcalan assignation, see also Nicholson (1963, 1966:154, 1967: 93). Aguilera (1988, 1990, 1997) has proposed on stylistic grounds that the Cospi is colonial, but see Anders, Jansen, and van der Loo (1994:28–42), who have argued strongly to the contrary.
 37. See the Tira de Tepechpan and Codex Saville, where the year dates are enclosed in circular cartouches.
 38. Nicholson (1963:86–89, 1966:152–153) explored many of these Gulf Coast elements but reached no firm conclusion because of the stylistic similarities with Mixtec codices. Nowotny (1961:16, 2005:9) originally compared the stiffness of the Fejérváry-Mayer and Laud to the Mali-

nalco murals, but there are few real similarities between them.

39. For the Postclassic styles and symbol sets, see Boone and Smith (2003).
 40. For central Mexican trade routes, see Litvak King (1978: 118); for those in and connecting Oaxaca, see Ball and Brockington (1978:108–110, 113); for those to Xicalanco and Xoconosco, see also León-Portilla (1985:16). For international trade centers, see Berdan et al. (2003:101–104), Gasco and Berdan (2003:110, 112–115), and Smith and Berdan (2003:29–30).
 41. See Pohl (2003a, 2003b, 2003c, 2003d) for discussions of different kinds of social and ritual structures that bound polities in this region together.
4. Thompson (1971:220, 1972:68–69) first pointed out the Nahua deity images; for the glyphic spellings, see Riese (1982), Whittaker (1986:57), and Taube and Bade (1991).
 5. The Codex Grolier also blends Maya and Mexican features in its one, incomplete almanac (Coe 1973: 151; Boone 2003:217–219). Its authenticity continues to be debated, however; see Baudez (2002) and Milbrath (2002), who argue that it is not a preconquest Maya manuscript.
 6. See Colby and Colby (1981:222–247) for the Ixil, and Tedlock (1982:152–171) for the Quiche of Momostenango. See also Miles (1952), who analyzed a number of then-surviving ancient calendars, mostly among the Maya.
 7. For survivals among the Mixes, see W. Miller (1952, 1966), Alfonso Villa Rojas in W. Miller (1956:55–65), Carrasco, Miller, and Weitlaner (1959), and Weitlaner-Johnson and Weitlaner (1963). For vestiges of the *tonalpo-hualli* among the southern Zapotecs, see Weitlaner (1958) and Weitlaner and de Cicco (1962). Van der Loo (1987: 112–133) has compared these survivals with the Borgia Group.
 8. For religious language, see Keane (1997:48–64).
 9. For scientific notation or “visibility” and the problems of expressing the unrepresentable, see Lynch (1985:37) and Elkins (1999:40–43).

9. A Mexican Divinatory System

1. These are on Borgia 9–13 and 22b–24 and Vaticanus B 28–32 and 87–94.
2. See Chapter 5. For the Macuiltonaleque, see Chapter 5, note 26; also Seler (1963, 2:63–65). For the Cihuateteo, see Sahagún (1953–1982, bk. 4:10, 41, 81, 93, 107, bk. 6: 162–163).
3. E.g., cited by Seler (1901–1902:28–31), Nowotny (1961: 227, 2005:244), Thies (1979), and Anders and Jansen (1988:40–41).

Bibliography

- Acosta, José de
1979 *Historia natural y moral de las Indias*. Edited by Edmundo O'Gorman. Mexico City: Fondo del Cultura Económica.
- Acuña, Rene (editor)
1982– *Relaciones geográficas del siglo XVI*. 10 vols. Mexico
1988 City: Universidad Nacional Autónoma de México.
- Aguilera, Carmen
1981 Estudio introductorio. In *El Tonalamatl de Aubin*. Códices y Manuscritos de Tlaxcala 1. Tlaxcala: Gobierno del Estado de Tlaxcala.
1985 *Flora y fauna mexicana: Mitología y tradiciones*. Mexico City: Editorial Everest Mexicana.
1986 *Lienzos y Códice de Tepeticpac*. Tlaxcala: Instituto Tlaxcalteca de la Cultura.
1988 *Códice Cospi: Calendario messicano 4093, Biblioteca Universitaria de Bolonia*. Puebla, Mexico: Gobierno del Estado de Puebla y Centro Regional del Instituto Nacional de Antropología, Puebla.
1990 A New Approach to *Codex Cospi*. In *LAIL Speaks: Selected Papers from the VII International Symposium on Latin American Indian Literatures*, edited by Mary H. Preuss, pp. 74–80. Culver City, Calif.: Labyrinthos.
1997 Aculturación en el Códice Cospi. *Estudios de Cultura Náhuatl* 27: 227–246.
- Alva Ixtlilxochitl, Fernando de
1985 *Obras históricas*. Edited by Edmundo O'Gorman. 2 vols. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
- Alvarado Tezozomoc, Fernando de
1975 *Crónica mexicana, . . . precedida del Códice Ramírez*. Edited by Manuel Orozco y Berra. Facsimile of the 1878 edition. Mexico City: Editorial Porrúa.
- Anawalt, Patricia Rieff
1981 Costume Analysis and the Provenience of the Borgia Group Codices. *American Antiquity* 46: 837–852.
- Ancona-Ha, Patricia, Jorge Pérez de Lara, and Mark van Stone
2000 Some Observations on Hand Gestures in Maya Art. In *The Maya Vase Book: Vol. 6*, edited by Barbara Kerr and Justin Kerr, pp. 1072–1089. New York: Kerr Associates.
- Anders, Ferdinand
1972 Einleitung, Summary und Resumen. In *Codex Vaticanus 3773 (Codex Vaticanus B), Biblioteca Apostolica Vaticana*. Graz: Akademische Druck- u. Verlagsanstalt.
1975 *Kunst und Kunstgewerbe altmexikos*. Amsterdam: Kroon-voordracht.
- Anders, Ferdinand, and Maarten Jansen
1986 *Altmexiko: Mexikanische Zauberfiguren, alte Handschriften beginnen zu sprechen*. Graz: Akademische Druck- u. Verlagsanstalt.
1988 *Schrift und Buch im alten Mexico*. Graz: Akademische Druck- u. Verlagsanstalt.
1993 *Manual del adivino: Libro explicativo del llamado Códice Vaticano B*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Madrid: Sociedad Estatal Quinto

- Centenario; Mexico City: Fondo de Cultura Económica.
- 1994 *La pintura de la muerte y de los destinos: Libro explicativo del llamado Códice Laud*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- 1996 *Libro de la vida: Texto explicativo del llamado Códice Magliabechiano*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- Anders, Ferdinand, Maarten Jansen, and Gabina Aurora Pérez Jiménez
- 1992a *Códice Vindobonensis: Origen e historia de los reyes mixtecos*. Facsimile with commentary and line drawing. Madrid: Sociedad Estatal Quinto Centenario; Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- 1992b *Códice Zouche-Nuttall, Crónica Mixteca: El rey 8 Venado, Garra de Jaguar, y la dinastía de Teozacualco-Zaachila*. Facsimile with commentary and line drawing. Madrid: Sociedad Estatal Quinto Centenario; Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- 1994 *El libro de Tezcatlipoca, Señor del Tiempo: Libro explicativo del llamado Códice Fejérváry-Mayer*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- Anders, Ferdinand, Maarten Jansen, and Luis Reyes García
- 1991 *El libro de Cuaucoatl, Homenaje para el año del Fuego Nuevo: Libro explicativo del llamado Códice Borbónico*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Madrid: Sociedad Estatal Quinto Centenario; Mexico City: Fondo de Cultura Económica.
- 1993 *Los templos del cielo y de la oscuridad, oráculos y liturgia: Libro explicativo del llamado Códice Borgia*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Madrid: Sociedad Estatal Quinto Centenario; Mexico City: Fondo de Cultura Económica.
- Anders, Ferdinand, Maarten Jansen, and Peter van der Loo
- 1994 *Calendario de pronósticos y ofrendas: Libro explicativo del llamado Códice Cospi*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt; Mexico City: Fondo de Cultura Económica.
- Andrews, J. Richard, and Ross Hassig
- 1988 Aztec Medical Astrology. In *Smoke and Mist: Mesoamerican Studies in Honor of Thelma D. Sullivan*, edited by J. Kathryn Josserand and Karen Dakin, vol. 2, pp. 605–627. BAR International Series 402. 2 vols. Oxford: BAR.
- Arana, Evangelina
- 1960 El idioma de los señores de Tepozcolula. *Anales del Instituto Nacional de Antropología e Historia* 8:217–230.
- Arnheim, Rudolf
- 1971 *Visual Thinking*. Berkeley: University of California Press.
- Asher, Marcia
- 1991 *Ethnomathematics: A Multicultural View of Mathematical Ideas*. Pacific Grove, Calif.: Brooks/Cole Publishing Co.
- Aveni, Anthony F.
- 1979 Venus and the Maya. *American Scientist* 67, no. 3:274–285.
- 1980 *Skywatchers of Ancient Mexico*. Austin: University of Texas Press.
- 1989 *Empires of Time: Calendars, Clocks, and Cultures*. New York: Basic Books.
- 1999 Astronomy in the Mexican Codex Borgia. *Archaeoastronomy* 24:S1–S20. Supplement to the *Journal for the History of Astronomy* 30.
- 2001 *Skywatchers*. Austin: University of Texas Press.
- Ball, Hugh. G., and Donald L. Brockington
- 1978 Trade and Travel in Prehispanic Oaxaca. In *Mesoamerican Communication Routes and Cultural Contacts*, edited by Thomas A. Lee, Jr., and Carlos Navarrete, pp. 107–114. Papers of the New World Archaeological Foundation 40. Provo, Utah: New World Archaeological Foundation, Brigham Young University.
- Barnes, William
- 1997 The Great Player God of Central Mexico: Xipe Totec in Precolumbian Style Codices. M.A. thesis. Tulane University, New Orleans.
- Batalla Rosado, Juan José
- 1991–1994 Teorías sobre el origen colonial del Códice Borbónico: Una revisión necesaria. *Cuadernos Prehispánicos* 15:5–42.
- 2002 *El Códice Tudela y el Grupo Magliabechiano: La tradición medieval europea de copia de códices en América*. Accompanied by a facsimile of the Codex Tudela. Colección Thesaurus Americae. Madrid: Ministerio de Educación Cultura y Deportes, Agencia Española de Cooperación Internacional, and Testimonio Compañía Editorial.
- Baudez, Claude-François
- 2002 Venus y el Códice Grolier. *Arqueología Mexicana* 10, no. 55:70–79, 98–102.

- Baudot, Georges
1995 *Utopia and History in Mexico: The First Chronicles of Mexican Civilization (1520–1569)*. Niwot: University Press of Colorado.
- Bellas, Monica L.
1997 The Body in the Mixtec Codices: Birth, Purification, Transformation and Death. Ph.D. dissertation, Department of Anthropology, University of California at Riverside.
- Beltrán, Beatriz Palavicini, and José Eduardo Contreras Martínez
1994 Un cajete policromo tipo códice, de Ocotelulco, Tlaxcala. In Anders, Jansen, and van der Loo 1994, pp. 99–107.
- Benson, Elizabeth P.
1974 Gestures and Offerings. In *Primera Mesa Redonda de Palenque*, edited by Merle Greene Robertson, vol. 1, pp. 109–120. 2 vols. Pebble Beach, Calif.: Pre-Columbian Art Research Institute.
1997 *Birds and Beasts of Ancient Latin America*. Gainesville: University Press of Florida.
- Berdan, Francis, and Patricia Anawalt
1997 *The Essential Codex Mendoza*. Berkeley and Los Angeles: University of California Press.
- Berdan, Francis F., Marilyn A. Masson, Janine Gasco, and Michael E. Smith
2003 An International Economy. In Smith and Berdan 2003, pp. 96–108.
- Bernal, Ignacio
1949 Exploraciones en Coixtlahuaca. *Revista Mexicana de Estudios Antropológicos* 10:5–76.
- Beyer, Hermann
1911 ¿Existe en el Códice Fejérváry-Mayer una representación de Huitzilopochtli? *Anales del Museo Nacional de Arqueología, Historia y Etnología*, ép. 3, vol. 2, no. 9:531–536.
1912 Correcciones del periodo de Venus en los códices Borgia y Porfirio Díaz. *Proceedings of the 17th International Congress of Americanists, 2nd Session, Mexico: 134–139*. Reprinted 1965 in *El México Antiguo* 10:291–295.
1965a La mariposa en el simbolismo azteca. *El México Antiguo* 10:465–468.
1965b El ojo en la simbología del México antiguo. *El México Antiguo* 10:488–493.
- Bierhorst, John (translator and editor)
1992 *History and Mythology of the Aztecs: The Codex Chimalpopoca*. Tucson: University of Arizona Press.
- Blom, Frans, and Oliver La Farge
1926– *Tribes and Temples: A Record of the Expedition to*
1927 *Middle America Conducted by the Tulane University of Louisiana in 1925*. 2 vols. Middle American Research Institute Publications 1. New Orleans: Tulane University.
- Boban, Eugène
1891 *Documents pour servir à l'histoire du Mexique*. 2 vols. and atlas. Paris: E. Leroux.
- Bober, Harry
1948 The Zodiacal Miniature of the *Très Riches Heures* of the Duke of Berry—Its Sources and Meaning. *Journal of the Warburg and Courtauld Institutes* 11:1–34.
- Boone, Elizabeth Hill
1982 Towards a More Precise Definition of the Aztec Painting Style. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins, pp. 153–168. 2nd ed. Palo Alto, Calif.: Peek Publications.
1983 *The Codex Magliabechiano and the Lost Prototype of the Magliabechiano Group*. Accompanied by a facsimile of the codex. Berkeley and Los Angeles: University of California Press.
1989 *Incarnations of the Aztec Supernatural: The Image of Huitzilopochtli in Mexico and Europe*. Transactions of the American Philosophical Society 79, no. 2. Philadelphia: American Philosophical Society.
1990 The Painting Styles of the Manuscripts of the Borgia Group. In *Circumpacific: Festschrift für Thomas S. Barthel*, edited by Bruno Illius and Matthias Laubscher, pp. 35–54. Frankfurt am Main, Bern, New York, Paris: Peter Lang.
1992 The Aztec Pictorial History in the Codex Mendoza. In *The Codex Mendoza*, edited by Frances E. Berdan and Patricia Rieff Anawalt, 1:35–54, 152–153. 4 vols. Berkeley: University of California Press.
1998 Pictorial Documents and Visual Thinking and Postconquest Mexico. In *Native Traditions in the Postconquest World*, edited by Elizabeth Hill Boone and Tom Cummins, pp. 149–199. Washington, D.C.: Dumbarton Oaks.
1999 The “Coatlicues” at the Templo Mayor. *Ancient Mesoamerica* 10:189–206.
2000a Bringing Polity to Place: Aztec and Mixtec Foundation Rituals. In *Tercer Simposio Internacional Códices y Documentos sobre México*, edited by Constanza Vega, pp. 547–573. Mexico City: Instituto Nacional de Antropología e Historia.
2000b *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*. Austin: University of Texas Press.
2003 A Web of Understanding: Pictorial Codices and

- the Shared Intellectual Culture of Late Postclassic Mesoamerica. In Smith and Berdan 2003, pp. 207–221.
- 2004 Beyond Writing. In *The First Writing*, edited by Stephen Houston, pp. 313–348. Cambridge: Cambridge University Press.
- 2005 *In Tlaminime*: The Wise Men and Women of Aztec Mexico. In *Painted Books and Indigenous Knowledge in Mesoamerica: Manuscript Studies in Honor of Mary Elizabeth Smith*, edited by Elizabeth Hill Boone, pp. 9–25. New Orleans: Middle American Research Institute, Tulane University.
- 2006 Is the Codex Laud Complete? In *The Bricker Almanac: A Festschrift in Honor of Harvey and Victoria Bricker*, edited by Gabrielle Vail, Timothy Knowlton, and Markus Eberl, pp. 99–108. *Human Mosaic* 36, no. 1. New Orleans: Department of Anthropology, Tulane University.
- n.d.a The Birth of the Day Count in the Codex Borgia. In *Jornadas académicas en homenaje a Eduardo Matos Moctezuma*, edited by Leonardo López Luján, Felipe Solís Olguín, and David Carrasco. Mexico City: Instituto Nacional de Antropología e Historia. Manuscript submitted to editors.
- n.d.b Marriage Almanacs in the Mexican Divinatory Codices. In *Anales del Instituto de Investigaciones Estéticas*. Manuscript submitted to editors.
- n.d.c When Art Is Writing and Writing, Art. In *Dialogues in Art History*, edited by Therese O'Malley. Studies in the History of Art. Washington, D.C.: National Gallery of Art. Manuscript submitted to editors.
- Boone, Elizabeth H., and Michael E. Smith
2003 Postclassic International Styles and Symbol Sets. In Smith and Berdan 2003, pp. 186–193.
- Bricker, Harvey M., and Victoria R. Bricker
n.d. Chapter 8: Solstices, Equinoxes, and Seasonal Phenomena: Section F: The God C Almanacs of the Paris Codex. In *Astronomy in the Maya Codices*. MS in preparation.
- Bricker, Harvey M., Victoria R. Bricker, and Bettina Wulffing
1997 Determining the Historicity of the Astronomical Almanacs in the Madrid Codex. *Archaeoastronomy* 22:S17–S36. Supplement to the *Journal for the History of Astronomy*.
- Bricker, Victoria R.
2001 A Method for Dating Venus Almanacs in the Borgia Codex. *Archaeoastronomy* 26:S21–S44. Supplement to the *Journal for the History of Astronomy*.
- 2002 The Mayan Uinal and the Garden of Eden. *Latin American Indian Literatures Journal* 18, no. 1:1–20.
- Bricker, Victoria R., and Gabrielle Vail (editors)
1997 *Papers on the Madrid Codex*. Middle American Research Institute, Publication 64. New Orleans: Tulane University.
- Broda de Casas, Johanna
1969 *The Mexican Calendar as Compared to Other Mesoamerican Systems*. Acta Ethnologica et Linguistica, no. 15. Vienna: Engelbert Stiglmayr.
- 1983 Ciclos agrícolas en el culto: Un problema de la correlación del calendario mexica. In *Calendars in Mesoamerica and Peru: Native American Computations of Time*, edited by Anthony F. Aveni and Gordon Brotherston, pp. 145–165. Proceedings of the 44th International Congress of Americanists, Manchester 1982. BAR International Series 174. Oxford: BAR.
- Brotherston, Gordon
1974 Huitzilopochtli and What Was Made of Him. In *Mesoamerican Archaeology: New Approaches*, edited by Norman Hammond, pp. 155–166. Austin: University of Texas Press.
- 1976 Mesoamerican Description of Space II: Signs for Direction. *Ibero-Amerikanisches Archiv* n.s. 2, no. 1:39–62.
- 1992 *The Book of the Fourth World: Reading the Native Americas through their Literature*. London: Cambridge University Press.
- 1995 *Painted Books from Mexico: Codices in UK Collections and the World They Represent*. London: British Museum Press.
- 1999 The Yearly Seasons and Skies in the Borgia and Related Codices. *ARARA: Art and Architecture of the Americas* 2, paper 6. Online Journal, Department of Art History and Theory, University of Essex (http://www2.essex.ac.uk/arhistory/arara/issue_two/paper6.html).
- n.d. The Year in the Mexican Codices: The Nature and Structure of the Eighteen Feasts. In *Models of the Year in Mesoamerican Texts*. British Museum Occasional Papers. London: British Museum. Forthcoming.
- Brown, Betty Ann
1977 European Influences in the Early Colonial Descriptions and Illustrations of the Mexican Monthly Calendar. Ph.D. dissertation, University of New Mexico.
- Burgos, Francisco de
1989 *Geográfica descripción de la parte septentrional del polo ártico de la América y, nueva iglesia de la Indias*

- Occidentales, y sitio astronómico de esta provincia de predicadores de Antequera Valle de Oaxaca*. 2 vols. Reprint of 1934 edition with an introduction by Barbro Dahlgren. Mexico City: Porrúa.
- Burkhardt, Louise
 1988 The Solar Christ in Nahuatl Doctrinal Texts of Early Colonial Mexico. *Ethnohistory* 35, no. 3: 234–256.
 1989 *The Slippery Earth: Nahuatl-Christian Moral Dialogue in Sixteenth-Century Mexico*. Tucson: University of Arizona Press.
- Burland, Cottie
 1948 Some Descriptive Notes on MS. Laud. Misc 678, a Pre-Columbian Mexican Document in the Bodleian Library of the University of Oxford. *Twenty-eighth International Congress of Americanists, Paris, 1947*: 371–376.
 1966 Introduction. In *Codex Laud: MS. Laud. Misc. 678, Bodleian Library, Oxford*. Accompanied by a facsimile of the codex. Graz: Akademische Druck- u. Verlagsanstalt.
 1971 Introduction. In *Codex Fejérváry-Mayer, 12014 M, City of Liverpool Museums*. Graz: Akademische Druck- u. Verlagsanstalt.
 1973 A Calendar of Fate: Life and Death in Two Mexican Codices in the Vatican Library. *Proceedings of the 40th International Congress of Americanists, Rome-Genova, 1972* 1: 443–446.
- Byland, Bruce E.
 1993 Introduction and Commentary. In *The Codex Borgia: A Full-Color Restoration of the Ancient Mexican Manuscript*, by Gisele Díaz and Alan Rodgers, pp. xiii–xxxii. New York: Dover Publications.
- Byland, Bruce E., and John M. D. Pohl
 1994 *In the Realm of 8 Deer: The Archaeology of the Mixtec Codices*. Norman: University of Oklahoma Press.
- Campbell, Jonathan A., and William W. Lamar
 1989 *The Venomous Reptiles of Latin America*. Ithaca and London: Comstock Publishing Associated, Cornell University Press.
- Carrasco, Pedro
 1950 *Los Otomíes: Cultura e historia prehispánicas de los pueblos mesoamericanos de habla otomiana*. Mexico City: Universidad Nacional Autónoma de México.
 1979 Las fiestas de los meses mexicanos. In *Mesoamérica: Homenaje al Doctor Paul Kirchhoff*, edited by Barbro Dahlgren, pp. 51–60. Mexico City: Instituto Nacional de Antropología e Historia.
- Carrasco, Pedro, Walter Miller, and Robert J. Weitlaner
 1959 El calendario mixteco. *El México Antiguo* 9: 153–171.
- Caso, Alfonso
 1927 Las ruinas de Tizatlan, Tlaxcala. *Revista Mexicana de Estudios Históricos* 1, no. 4: 139–172.
 1932 Monte Alban, Richest Archaeological Find in America. *National Geographic Magazine* 62: 487–512.
 1956 El calendario mixteco. *Historia Mexicana* 5: 20: 481–497.
 1959a Nombres calendáricos de los dioses. *El México Antiguo* 9: 77–100.
 1959b Nuevos datos para la correlación de los años aztecas y cristiano. *Estudios de Cultura Náhuatl* 1: 9–25.
 1962 Review: Donald Robertson, *Mexican Manuscript Painting of the Early Colonial Period*, New Haven: Yale University Press, 1959. *Americas* 19, no. 1: 100–107.
 1964 *Interpretación del Códice Selden, 3135 (A.2)*. Published with a facsimile of the codex. Mexico City: Sociedad Mexicana de Antropología.
 1965 Zapotec Writing and Calendar. In *Handbook of Middle American Indians*, vol. 3, edited by Robert Wauchope and Gordon Willey, pp. 931–947. Austin: University of Texas Press.
 1966a El culto al sol: Notas a la interpretación de W. Lehmann. *Traducciones Mesoamericanistas* 1: 177–190. Mexico City: Sociedad Mexicana de Antropología.
 1966b *Interpretación del Códice Colombino/Interpretation of the Codex Colombino*. Accompanied by a facsimile of the codex. Mexico City: Sociedad Mexicana de Antropología.
 1967 *Los calendarios prehispánicos*. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
 1971 Calendrical Systems of Central Mexico. In *Handbook of Middle American Indians*, vol. 10, edited by Robert Wauchope, Gordon F. Ekholm, and Ignacio Bernal, pp. 333–348. Austin: University of Texas Press.
 1977–
 1979 *Reyes y reinos de la Mixteca*. 2 vols. Mexico City: Fondo de Cultura Económica.
- Cervantes de Salazar, Francisco
 1971 *Crónica de la Nueva España*. Edited by Manuel Magallón. Biblioteca de Autores Españoles, vols. 244–245. 2 vols. Madrid: Ediciones Atlas.
- Chadwick, Robert, and Richard S. MacNeish
 1967 Codex Borgia and the Venta Salada Phase. In *The Prehistory of the Tehuacan Valley*, edited by Douglas S. Byers, vol. 1, pp. 114–131. 5 vols. Austin: University of Texas Press.

- Chavero, Alfredo
 1892 *Homenaje a Cristóbal Colón: Antigüedades mexicanas publicadas por la Junta Colombino de México en el cuarto centenario del descubrimiento de América*. Mexico City: Secretaría de Fomento.
- Clavijero, Francisco Javier
 1780–1781 *Storia antica del Messico*. 4 vols. Cesena: G. Biasini.
- Cline, Howard F.
 1966 The Oztoticpac Lands Map of Texcoco, 1540. *Quarterly Journal of the Library of Congress* 23, no. 2: 77–115.
- Closs, Michael P., Anthony F. Aveni, and Bruce Crowley
 1984 The Planet Venus and Temple 22 at Copán. *Indiana* 9: 221–247.
- Codex Azoyu I
 1991 *Códice Azoyú: El reino de Tlachinollan*. Including a facsimile. Edited and interpreted by Constanza Vega Sosa. 2 vols. Mexico City: Fondo de Cultura Económica.
- Codex Bodley
 1960 Alfonso Caso. *Interpretación del Códice Bodley 2858/Interpretation of the Codex Bodley 2858*. Accompanied by a facsimile of the codex. Mexico City: Sociedad Mexicana de Antropología.
- Codex Borbonicus
 1898 See Paso y Troncoso 1898b.
 1899 See Hamy 1899a.
 1974 *Codex Borbonicus, Bibliothèque de l'Assemblée Nationale—Paris (Y120)*. History and description by Karl Anton Nowotny and Jacqueline de Durand-Forest. Graz: Akademische Druck- u. Verlagsanstalt.
 1991 See Anders, Jansen, and Reyes García 1991.
- Codex Borgia
 1904–1909 See Selser 1904–1909.
 1963 See Selser 1963.
 1976 *Codex Borgia: Biblioteca Apostolica Vaticana (Messicano Riserva 28)*. Introduction by Karl Anton Nowotny. Graz: Akademische Druck- u. Verlagsanstalt.
 1993a See Anders, Jansen, and Reyes García 1993.
 1993b See Díaz and Rodgers 1993.
- Codex Chimalpahin
 1997 *Codex Chimalpahin: Society and Politics in Mexico Tenochtitlan, Tlatelolco, Texcoco, Culhuacan, and Other Nahuatl Altepetl in Central Mexico*. 2 vols. Translated and edited by Arthur J. O. Anderson and Susan Schroeder. Susan Schroeder, general editor. Norman: University of Oklahoma Press.
- Codex Chimalpopoca
 1992 *History and Mythology of the Aztecs: The Codex Chimalpopoca*. Translated and edited by John Bierhorst. Tucson: University of Arizona Press.
- Codex Colombino
 1966 See Caso 1966b.
- Codex Cospi
 1898 See Paso y Troncoso 1898a.
 1968 *Codex Cospi: Calendario Messicano 4093, Biblioteca Universitaria Bologna*. Introduction and summary by Karl Anton Nowotny. Graz: Akademische Druck- u. Verlagsanstalt.
 1992 See Laurencich Minelli 1992.
 1994 See Anders, Jansen, and van der Loo 1994.
- Codex Féjerváry-Mayer
 1901 *Codex Féjerváry-Mayer: Manuscrit mexicain pré-colombien des Free Public Museums de Liverpool (M 12014) publié en chromophotographie par le Duc de Loubat*. Facsimile with introductory pamphlet by the Duc de Loubat. Paris: Philippe Renouard.
 1971 *Codex Féjerváry-Mayer 12–14 M, City of Liverpool Museums*. Introduction by Cottie A. Burland. Graz: Akademische Druck- u. Verlagsanstalt.
 1994 See Anders, Jansen, and Pérez Jiménez 1994.
- Codex Laud
 1961 *Códice Laud*. Edited by Carlos Martínez Marín. Mexico City: Instituto Nacional de Antropología e Historia.
 1966 *Codex Laud: MS. Laud Misc. 678, Bodleian Library, Oxford*. Introduction by Cottie A. Burland. Graz: Akademische Druck- u. Verlagsanstalt.
 1994 See Anders and Jansen 1994.
- Codex Magliabechiano
 1904 *Codex Magliabechiano XIII.3: Manuscrit mexicain Post-Colombien de la Bibliothèque Nationale de Florence. Reproduit en photochromographie aux Frais du Duc de Loubat*. Rome: Danesi.
 1970 *Codex Magliabechiano, CL. XIII. 3 (B.R. 232), Biblioteca Nazionale Centrale di Firenze*. Edited by Ferdinand Anders. Graz: Akademische Druck- u. Verlagsanstalt.
 1996 See Anders and Jansen 1996.
- Codex Mendoza
 1992 Frances F. Berdan and Patricia Rieff Anawalt. *The Codex Mendoza*. 4 vols. Berkeley: University of California Press.
- Codex Mexicanus
 1952 *Codex Mexicanus: Bibliothèque Nationale de Paris, Nos. 23–24*. Facsimile published as a supplement to the *Journal de la Société des Américanistes* 41, to accompany Mengin 1952.
- Codex Porfirio Díaz
 1892 In Chavero 1892, 1: xi–xix; 21 plates in the atlas.

- Codex Selden
1964 See Caso 1964.
- Codex Telleriano-Remensis
1899 See Hamy 1899b.
1995 See Quiñones Keber 1995.
- Codex Tudela
1980 See Tudela de la Orden 1980.
2002 See Batalla Rosado 2002.
- Codex Vaticanus A/Ríos
1900 See Ehrle 1900.
1979 *Codex Vaticanus 3738* ("Cod. Vat. A," "Cod. Ríos") *der Bibliotheca Apostolica Vaticana*. Graz: Akademische Druck- u. Verlagsanstalt.
- Codex Vaticanus B
1896 See Ehrle 1896.
1972 *Codex Vaticanus 3773* (*Codex Vaticanus B*), *Bibliotheca Apostolica Vaticana*. With an introduction by Ferdinand Anders. Graz: Akademische Druck- u. Verlagsanstalt.
1993 See Anders and Jansen 1993.
- Codex Vienna
1963 *Codex Vindobonensis Mexicanus I*, *Österreichische Nationalbibliothek Wien*. History and description by Otto Adelhofer. Graz: Akademische Druck- u. Verlagsanstalt. See also Anders, Jansen, and Pérez Jiménez 1992a.
- Codex Zouche-Nuttall
1987 *Codex Zouche-Nuttall, British Museum, London* (Add. MS. 39671). With an introduction by Nancy P. Troike. Graz: Akademische Druck- u. Verlagsanstalt. See also Anders, Jansen, and Pérez Jiménez 1992b.
- Coe, Michael D.
1973 *The Maya Scribe and His World*. New York: Grolier Club.
- Coggins, Clemency
1980 The Shape of Time: Some Political Implications of a Four-Part Figure. *American Antiquity* 45, no. 4: 727–739.
- Colby, Benjamin N., and Lore M. Colby
1981 *The Daykeeper: The Life and Discourse of an Ixil Diviner*. Cambridge, Mass.: Harvard University Press.
- Contreras Martínez, José Eduardo
1990 Los hallazgos arqueológicos de Ocotelulco, Tlaxcala. *Arqueología, Revista de la Dirección de Arqueología del Instituto Nacional de Antropología e Historia*, ép. 2, 7: 113–118.
1992 Excavaciones arqueológicas en Ocotelulco. *Consejo de Arqueología Boletín* 1991: 50–55.
1994a Las estructuras policromas de Ocotelulco, Tlaxcala: Arquitectura, historia y descripción. In Anders, Jansen, and van der Loo 1994, pp. 109–117.
1994b Los murales y cerámica policromos de la zona arqueológica de Ocotelulco, Tlaxcala. In Nicholson and Quiñones Keber 1994, pp. 7–24.
- Cook de Leonard, Carmen
1952– Los Popolocas de Puebla. In *Huastecos, Totonacos, y sus vecinos*, edited by Ignacio Bernal and Eusebio Davalos Hurtado, pp. 423–445. *Revista Mexicana de Estudios Antropológicos* 13, no. 2–3.
- Córdova, Juan de
1987 *Arte del idioma zapoteca*. Facsimile of 1886 edition, edited by Nicolás León. Mexico City: Ediciones Toledo, Instituto Nacional de Antropología e Historia.
- Corona Núñez, José
1964– *Antigüedades de México, basadas en la recopilación de Lord Kingsborough*. 4 vols. Mexico City: Secretaría de Hacienda y Crédito Público.
1967
- Couch, N. C. Christopher
1985 *The Festival Cycle of the Aztec Codex Borbonicus*. BAR International Series 270. Oxford: BAR.
- Crump, Thomas
1990 *The Anthropology of Numbers*. Cambridge Studies in Social Anthropology 70. Cambridge: Cambridge University Press.
- Dahlgren de Jordán, Barbro
1954 *La Mixteca: Su cultura y historia prehispánicas*. Mexico City: Universidad Nacional Autónoma de México.
- Davies, Claude Nigel
1973 *Los Mexicas: Primeros pasos hacia el imperio*. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
- Dehouve, Danièle
2001 El Fuego Nuevo: Interpretación de una "ofrenda contada" tlapaneca (Guerrero, México). *Journal de la Société des Américanistes* 87: 89–112.
- Dennis, Bryan J.
1994 Narrative Sequences in the Codex Borgia and the Codex Zouche-Nuttall. In Nicholson and Quiñones Keber 1994, pp. 153–173.
- Díaz, Gisele, and Alan Rodgers
1993 *The Codex Borgia: A Full-Color Restoration of the Ancient Mexican Manuscript, with a New Introduction and Commentary by Bruce E. Byland*. New York: Dover Publications.
- Díaz del Castillo, Bernal
1956 *The Discovery and Conquest of Mexico, 1517–1521*. Translated by Irving A. Leonard. Edited by Genaro García. New York: Farrar, Straus and Cudahy.

- Dibble, Charles E.
1984 Sahagún's *Tonalpohualli*. *Indiana* 9:115–122.
- Doesburg, Sebastián van
1998 El origen de cuatro documentos pictográficos de Oaxaca en la “Exposición Histórico-americana” de 1892. *Cuadernos del Sur* (Oaxaca) 13:103–114.
- 2001 *Códices cuicatecos Porfirio Díaz y Fernández Leal*. Mexico City: Miguel Ángel Porrúa.
- Duinmeijer, Bob
1997 The Mesoamerican Calendar of the Mixes, Oaxaca, Mexico. *Yumitzilob* 9, no. 2:173–206.
- Durán, Diego
1971 *Book of the Gods and Rites and the Ancient Calendar*. Translated and edited by Fernando Horcasitas and Doris Heyden. Norman: University of Oklahoma Press.
- 1994 *The History of the Indies of New Spain*. Translated by Doris Heyden. Norman: University of Oklahoma Press.
- Durand-Forest, Jacqueline de
1989 Códice Borbónico y Códice Tonalamatl Aubin, Semejanzas y diferencias, a propósito de un caso particular: Los nueve Señores de la Noche. In *Primer coloquio de documentos pictográficos de tradición náhuatl*, edited by Carlos Martínez Marín, pp. 261–278. Mexico City: Universidad Nacional Autónoma de México.
- Earle, Duncan, and Dean Snow
1985 The Origin of the 260-day Calendar: Gestation Hypothesis Reconsidered in Light of Its Use among the Quiché-Maya. In *Fifth Palenque Round Table, 1983*, edited by Virginia Fields, vol. 7, pp. 241–244. San Francisco: Pre-Columbian Art Research Institute.
- Eberl, Markus
2002 The Creation of Human Beings: On the Birth Almanacs in Highland Mexican Codices. Paper written for the Seminar on Mexican Manuscript Painting, Elizabeth Boone, Department of Art, Tulane University, fall 2000.
- Edmonson, Munro S.
1986 *Heaven Born Merida and Its Destiny: The Book of Chilam Balam of Chumayel*. Austin: University of Texas Press.
- Ehrle, Franz
1896 *Il manoscritto messicano Vaticano 3773, reproduetto in fotocromografia a spese di S. E. il duca di Loubat a cura della Biblioteca Vaticana*. Also includes the pamphlet “Los Libros de Anahuac” by Francisco del Paso y Troncoso. Rome: Danesi.
- 1898 *Il manoscritto messicano Borgiano del Museo Etnografico della S. Congregazione de Propaganda Fide, reproduetto in fotocromografia a spese di S. E. il Duca di Loubat a cura della Biblioteca Vaticana*. Rome: Danesi.
- 1900 *Il manoscritto messicano vaticano 3738, detto il Codice Rios, reproduetto in fotocromografia a spese di sua eccellenza il duca di Loubat per cura della Biblioteca Vaticana*. Rome: Danesi.
- Elkins, James
1999 *The Domain of Images*. Ithaca: Cornell University Press.
- Fabrega, José Lino
1899 Interpretación del Códice Borgia. *Anales del Museo Nacional de México*, ép. 1, no. 5:1–260. Italian, with Spanish translation by Alfredo Chavero.
- Florescano, Enrique
1994 *Memory, Myth, and Time in Mexico: From the Aztecs to Independence*. Translated from the Spanish by Albert G. Bork with Kathryn R. Bork. Austin: University of Texas Press.
- Furst, Jill Leslie
1978a *The Codex Vindobonensis Mexicanus I: A Commentary*. Albany: Institute for Mesoamerican Studies, State University of New York at Albany.
- 1978b The Year 1 Reed, Day 1 Alligator: A Mixtec Metaphor. *Journal of Latin American Lore* 4, no. 1:93–128.
- 1986 The Lords of “Place of the Ascending Serpent”: Dynastic Succession on the Nuttall Obverse. In *Symbol and Meaning beyond the Closed Community: Essays in Mesoamerican Ideas*, edited by Gary H. Gossen, pp. 57–68. Albany: Institute for Mesoamerican Studies, University at Albany, State University of New York.
- 1995 *The Natural History of the Soul in Ancient Mexico*. New Haven: Yale University Press.
- Galinier, Jacques
1987 *Pueblos de la Sierra Madre: Etnografía de la comunidad otomí*. Clásicos de la Antropología 17. Mexico City: Instituto Nacional de Antropología e Historia.
- García Granados, Rafael
1940– Observaciones sobre los códices pre-hispánicos de México y reparos que estas sugieren acerca de su clasificación. *El México Antiguo* 5:41–47.
- 1941
- 1942 Estudio comparativo de los signos cronográficos en los códices prehispánicos de Mejioco. *Proceedings of the 27th International Congress of Americanists, Mexico* 1:419–469.
- García Icazbalceta, Joaquín
1941 *Nueva colección de documentos para la historia de México*. 3 vols. Mexico City: Salvador Chávez Hayhoe.

- García Payón, José
1949 Zempoala: Compendio de su estudio arqueológico. *Uni-ver* 1, no. 8: 449–476. Jalapa: Universidad Veracruzana.
- Garibay K., Ángel María
1944– Paraliómenos de Sahagún. *Tlalocan* 1, no. 4: 307–
1947 313; 2, no. 2: 167–174; 2, no. 3: 235–254.
1964– *Poesía náhuatl*. 3 vols. Mexico City: Universidad
1968 Nacional Autónoma de México.
1979 *Teogonía e historia de los mexicanos: Tres opúsculos del siglo XVI*. 3rd ed. Mexico City: Editorial Porrúa.
- Gasco, Janine, and Frances F. Berdan
2003 International Trade Centers. In Smith and Berdan 2003, pp. 109–116.
- Gates, William (translator and editor)
1939 *The De la Cruz–Badiano Aztec Herbal of 1552*. Baltimore: Maya Society.
- Gell, Alfred
1992 *The Anthropology of Time: Cultural Constructions of Temporal Maps and Images*. Oxford: Berg.
- Gerhard, Peter
1972 *A Guide to the Historical Geography of New Spain*. Cambridge: Cambridge University Press.
- Gibson, Charles, and John B. Glass
1975 A Census of Middle American Prose Manuscripts in the Native Historical Tradition. In *Handbook of Middle American Indians*, vol. 15, edited by Robert Wauchope and Howard F. Cline, pp. 322–400. Austin: University of Texas Press.
- Gilonne, Michel
1977 L'Avifaune dans le Codex Borbonicus. *Proceedings of the 42nd International Congress of Americanists, Paris, 1976*, supplemental vol.: 29–42.
- Glass, John B.
1975a (in collaboration with Donald Robertson) A Census of Native Middle American Pictorial Manuscripts. In *Handbook of Middle American Indians*, vol. 15, edited by Robert Wauchope and Howard F. Cline, pp. 81–252. Austin: University of Texas Press.
1975b A Survey of Native Middle American Pictorial Manuscripts. In *Handbook of Middle American Indians*, vol. 15, edited by Robert Wauchope and Howard F. Cline, pp. 3–80. Austin: University of Texas Press.
- González Torres, Yolotl
2001 *Animales y plantas en la cosmovisión mesoamericana*. Mexico City: Plaza y Valdés and Instituto Nacional de Antropología e Historia.
- Gorenstein, Shirley
1973 *Tepehi el Viejo: A Postclassic Fortified Site in the Mixteca-Puebla Region of Mexico*. American Philosophical Society Transactions 63, no. 1. Philadelphia: American Philosophical Society.
- Granata, Joseph John
1980 The Significance of Zoological Identification of Serpent Species in the Pictorial Manuscripts of Ancient Mexico. Ph.D. dissertation, University of Texas at Austin.
- Graulich, Michele
1997 *Myths of Ancient Mexico*. Translated by Bernard R. Ortiz de Montellano and Thelma Ortiz de Montellano. Norman: University of Oklahoma Press.
- Greenleaf, Richard E.
1961 *Zumárraga and the Mexican Inquisition, 1536–1543*. Washington, D.C.: Academy of American Franciscan History.
- Guilliem Arroyo, Salvador
1998 El Templo Calendárico de México-Tlatelolco. *Arqueología Mexicana* 6, no. 34: 46–53.
- Gutiérrez Solana, Nelly
1985 *Códices de México: Historia e interpretación de los grandes libros pintados prehispánicos*. Mexico City: Panorama Editorial.
1986 Sobre el significado de los bultos sagrados y de las figures incompletos en los códices. *Anales del Instituto de Investigaciones Estéticas* 15, no. 57: 23–36. Mexico City: Universidad Nacional Autónoma de México.
- Hagar, Stansbury
1911 The Four Seasons of the Mexican Ritual of Infancy. *American Anthropologist* 13: 229–234.
1912 The Mexican Maize Season in the Codex Fejérváry-Mayer. *American Anthropologist* 14: 525–529.
- Hamann, Byron
2004 Seeing and the Mixtec Screenfolds. *Visible Language* 38, no. 1: 68–122.
- Hamy, Ernest Théodore
1899a *Codex Borbonicus: Manuscrit mexicain de la Bibliothèque du Palais Bourbon (livre divinatoire et rituel figure) publié en facsimilé, avec un commentaire explicatif*. Paris: Ernest Leroux.
1899b *Codex Telleriano-Remensis: Manuscrit mexicain du cabinet de Ch. M. Le Tellier, Archevêque de Reims, à la Bibliothèque Nationale (MS. Mexicain no. 385)*. Paris: Bibliothèque Nationale.
- Harris, Robert L.
1999 *Information Graphics: A Comprehensive Illustrated Reference*. Atlanta: Management Graphics; and New York and Oxford: Oxford University Press.
- Hassig, Ross
1982 Periodic Markets in Precolumbian Mexico. *American Antiquity* 47, no. 2: 346–355.

- 2001 *Time, History, and Belief in Aztec and Colonial Mexico*. Austin: University of Texas Press.
- Henderson, John S.
- 1974 Origin of the 260-Day Cycle in Mesoamerica. *Science* 185:542–543.
- Hernández, Christine
- 2004 “Yearbearer Pages” and Their Connection to Planting Almanacs in the Borgia Codex. In Vail and Aveni 2004, pp. 321–364.
- 2006 Using Astronomical Imagery to Cross-Date an Almanac in the Codex Borgia. In *The Bricker Almanac: A Festschrift in Honor of Harvey and Victoria Bricker*, edited by Gabrielle Vail, Timothy Knowlton, and Markus Eberl, pp. 125–143. *Human Mosaic* 36, no. 1. New Orleans: Department of Anthropology, Tulane University.
- n.d. The Auguries for Planting Maize in the *Borgia Codex*. Manuscript.
- Hernández, Christine, and Victoria R. Bricker
- 2004 The Inauguration of Planting in the Borgia and Madrid Codices. In Vail and Aveni 2004, pp. 277–320.
- Hernández, Francisco
- 1959 *Historia natural de Nueva España*. 2 vols. Vols. 2–3 of his *Obras completas*. Mexico City: Universidad Nacional de México.
- Heyden, Doris
- 1969 Una diosa con multiples advocaciones. *Boletín del Instituto Nacional de Antropología e Historia* 37:51–54.
- 1972 Xiuhtecuhtli: Investidor de soberanos. *Boletín del Instituto Nacional de Antropología e Historia*, ép. 3, no. 3:3–10.
- 1977 The Year Sign in Ancient Mexico: A Hypothesis as to Its Origin and Meaning. In *Pre-Columbian Art History: Selected Readings*, edited by Alana Cordy-Collins and Jean Stern, pp. 213–237. Palo Alto, Calif.: Peek Publications.
- 1984 Las anteojeras serpentine de Tlalóc. *Estudios de Cultura Náhuatl* 17:23–32.
- 1986 Metaphors, Nahuatl, and Other “Disguised” Terms among the Aztec. In *Symbol and Meaning beyond the Closed Community: Essays in Mesoamerican Ideas*, edited by Gary Gossen, pp. 35–43. Albany: State University of New York at Albany.
- 1994 Guajolote, guajolote: ¿Quién eres en realidad? In *Códices y documentos sobre México: Primer simposio*, edited by Constanza Vega Sosa, pp. 173–192. Mexico City: Instituto Nacional de Antropología e Historia.
- Historia de los Mexicanos por sus Pinturas
- 1979 Historia de los mexicanos por sus pinturas. In Garibay K. 1979, pp. 23–66.
- Houston, Stephen D.
- 2001 Decorous Bodies and Disordered Passions: Representations of Emotion among the Classic Maya. *World Archaeology* 33, no. 2:206–219.
- Humboldt, Alexander von
- 1810 *Vues des cordillères et monumens des peuples indigènes de l'Amérique*. Paris: Chez F. Schoell.
- Hunt, Eva
- 1978 The Provenience and Contents of the Porfirio Díaz and Fernández Leal Codices: Some New Data and Analysis. *American Antiquity* 43, no. 4:673–690.
- Hurford, James R.
- 1987 *Language and Number: The Emergence of a Cognitive System*. Oxford: Basil Blackwell.
- Hvidfeldt, Arild
- 1958 *Teotl and Ixiptlatli: Some Central Concepts in Ancient Mexican Religion*. Copenhagen: Munksgaard.
- Ichon, Alain
- 1973 *La religión de los totonacas de la sierra*. Mexico City: Instituto Nacional de Antropología e Historia.
- Jansen, Maarten
- 1978 Review of *Codex Borgia, Biblioteca Apostolica Vaticana (Codex Borgia Messicano I)* with a commentary by Karl Anton Nowotny. *Boletín de Estudios Latinoamericanos y del Caribe* 24:111–116.
- 1982a The Four Quarters of the Mixtec World. In *Space and Time in the Cosmivision of Mesoamerica*, edited by Franz Tichy, pp. 85–95. *Latinamerika Studien* 10. Munich: Wilhelm Fink.
- 1982b *Huusi tacu: Estudio interpretativo de un libro mixteco antiguo: Codex Vindobonensis Mexicanus I*. 2 vols. Amsterdam: Centro de Estudios y Documentación Latinoamericanos.
- 1984 El Códice Ríos y Fray Pedro de los Ríos. *Boletín de Estudios Latinoamericanos y del Caribe* 36:69–81.
- 1985 Las lenguas divinas del México precolonial. *Boletín de Estudios Latinoamericanos y del Caribe* 38:3–14.
- 1986 La división mántica de las trecenas. *Mexicon* 8, no. 5:102–107.
- 1988a The Art of Writing in Ancient Mexico: An Ethno-iconological Perspective. *Visible Religion: Annual for Religious Iconography* 6 (*The Image in Writing*): 86–113.
- 1988b Dates, Deities, and Dynasties: Non-durational Time in Mixtec Historiography. In *Continuity and Identity in Native America*, edited by Maar-

- ten Jansen, Peter van der Loo, and Roswitha Manning, pp. 156–192. Leiden: E. J. Brill.
- 1990 The Search for History in Mixtec Codices. *Ancient Mesoamerica* 1, no. 1: 99–112.
- Jansen, Maarten, and Gabina Aurora Pérez Jiménez
2000 *La dinastía de Añute: Historia, literatura e ideología de un reino mixteco*. Leiden: Research School CNWS, Universiteit Leiden.
- 2004 Renaming the Mexican Codices. *Ancient Mesoamerica* 15: 267–271.
- Jiménez Moreno, Wigberto
1961 Diferente principio del año entre diversos pueblos y sus consecuencias para la cronología prehispánica. *El México Antiguo* 9: 137–152.
- Jiménez Moreno, Wigberto, and Salvador Mateos Higuera (editors)
1940 *El Códice de Yanhuitlan*. Mexico City: Instituto Nacional de Antropología e Historia.
- Johnson, Nicholas Carter
2005 The Format of the Prehispanic Mixtec Screenfold Manuscripts. Ph.D. dissertation, Tulane University.
- Just, Bryan R.
2000 Concordances of Time: In Extenso Almanacs in the Madrid and Borgia Group. *Human Mosaic* 33, no. 1: 7–16. New Orleans: Department of Anthropology, Tulane University.
- 2004 In Extenso Almanacs in the Madrid Codex. In Vail and Aveni 2004, pp. 255–276.
- Keane, Webb
1997 Religious Language. *Annual Review of Anthropology* 26: 47–71.
- Kingsborough, Lord
1831–
1848 *Antiquities of Mexico, Comprising Facsimiles of Ancient Mexican Paintings and Hieroglyphics . . . the Whole Illustrated by Many Valuable Inedited Manuscripts by Lord Kingsborough. The Drawings, on Stone, by A. Aglio*. 9 vols. (1–7, 1831; 8–9, 1848). London: Havel and Conlagghi, Son.
- Kirchhoff, Paul
1954–
1955 *Calendarios Tenochca, Tlatelolca y otros. Revista Mexicana de Estudios Antropológicos* 14: 257–267.
- Klein, Cecelia
1980 Who Was Tlaloc? *Journal of Latin American Lore* 6: 155–204.
- 1987 The Ideology of Autosacrifice at the Templo Mayor. In *The Aztec Templo Mayor*, edited by Elizabeth H. Boone, pp. 293–370. Washington, D.C.: Dumbarton Oaks.
- 1988 Rethinking Cihuacoatl: Aztec Political Imagery of the Conquered Woman. In *Smoke and Mist: Mesoamerican Studies in Honor of Thelma D. Sullivan*, edited by J. Kathryn Josserand and Karen Dakin, pp. 237–277. BAR International Series 402. Oxford: BAR.
- 2000 The Devil and the Skirt: An Iconographic Inquiry into the Pre-Hispanic Nature of the Tzitzimime. *Ancient Mesoamerica* 11: 1–26.
- 2001 None of the Above: Gender Ambiguity in Nahua Ideology. In *Gender in Pre-Hispanic America*, edited by Cecelia F. Klein, pp. 183–253. Washington, D.C.: Dumbarton Oaks.
- 2002 Iconografía y el arte mesoamericano. *Arqueología Mexicana* 10, no. 55: 28–35, 88–91.
- Klopfer, Helmut (translator and editor)
1989 *Das arabische Traumbuch des Ibn Sirin*. With an essay on dreambooks by Michael Lackner. Munich: Diedrichs.
- Kress, Gunther, and Theo van Leeuwen
1996 *Reading Images: The Grammar of Visual Design*. London and New York: Routledge.
- Krickeberg, Walter
1961 *Las antiguas culturas mexicanas*. Mexico City: Fondo de Cultura Económica.
- Kubler, George, and Charles Gibson
1951 *The Tovar Calendar: An Illustrated Mexican Manuscript ca. 1585*. Memoirs of the Connecticut Academy of Arts and Sciences, vol. 11. New Haven: Connecticut Academy of Arts and Sciences.
- Kurbjuhn, Kornelia
1990 Toloq-mezel: A Maya Gesture. In *Circumpacifica: Festschrift für Thomas S. Barthel*, edited by Bruno Illius and Matthias Laubscher, vol. 1, pp. 278–287. 2 vols. Frankfurt am Main: Peter Lang.
- Las Casas, Bartolomé de
1967 *Apologética historia sumaria*. 2 vols. Edited by Edmundo O'Gorman. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
- Laurencich Minelli, Laura
1992 (editor) *Codice Cospi: Calendario e ritual precolombiani*. Milan: Jaca Book.
- 1999a A Note on the Mesoamerican *Codex Cospi*. *Journal de la Société des Américanistes* 85: 375–386.
- 1999b A Note on the Working Techniques of the Codex Cospi and the Vaticanus 3773. *Thule: Rivista Italiana di Studi Americanistici* 6/7: 103–117.
- Laurencich Minelli, Laura, Giorgio Gasparotto, and Giovanni Valdrè
1993 Notes about the Painting Techniques and the Morphological, Chemical and Structural Char-

- acterization of the Writing Surface of the Prehispanic Mexican Codex Cospi. *Journal de la Société des Américanistes* 79:203–207.
- Lehmann, Walter
- 1905 Die fünf im Kindbett gestorbenen Frauen des Westens und die fünf Götter des Südens in der mexikanischen Mythologie. *Zeitschrift für Ethnologie* 37, no. 6:848–871.
- 1966 Las cinco mujeres del oeste muertas en el parto y los cinco dioses del sur en la mitología mexicana. *Traducciones Mesoamericanas* 1:147–175, 2 color plates. Translated from the German by Barbro Dahlgren Jordán.
- Lenz, Hans
- 1948 *El papel indígena mexicano: Historia y supervivencia*. Mexico City: Editorial Cultural.
- 1984 *Cosas del papel en Mesoamérica*. Mexico City: Editorial Libros de México.
- León-Portilla, Miguel
- 1963 *Aztec Thought and Culture: A Study of the Ancient Nahuatl Mind*. Civilization of the American Indian Series 67. Norman: University of Oklahoma Press.
- 1980 *Toltecatl: Aspectos de la cultura náhuatl*. Mexico City: Fondo de Cultura Económica.
- 1985 *Tonalámatl de los pochtecas (Códice mesoamericano Fejérváry-Mayer)*. Mexico City: Celanese Mexicana.
- 1986 *Pre-Columbian Literatures of Mexico*. Translated from the Spanish by Grace Lobanov and the author. Norman: University of Oklahoma Press.
- 1991 Estudio introductorio. In *Huehuetlatolli: Testimonios de la antigua palabra*, translated by Librado Silva Galeana, pp. 7–45. Mexico City: Secretaría de Educación Pública and Fondo de Cultura Económica.
- 1992a *The Aztec Image of Self and Society: An Introduction to Nahuatl Culture*. Salt Lake City: University of Utah Press.
- 1992b Dioses. In *Azteca-Mexica*, edited by José Alcina Franch, Miguel León-Portilla, and Eduardo Matos Moctezuma, pp. 313–332. Madrid: Sociedad Estatal Quinto Centenario and Lunewerg Editores.
- 1992c Have We Really Translated the Mesoamerican “Ancient Word”? In *On the Translation of Native American Literatures*, edited by Brian Swann, pp. 313–338. Washington, D.C.: Smithsonian Institution.
- León y Gama, Antonio
- 1832 *Descripción histórica y cronológica de las dos piedras que con ocasión del Nuevo empedrado que se está formando en la plaza principal de México se hallaron en ella el año de 1790*. 2nd ed. Edited by Carlos María de Bustamante. Mexico City: Alejandro Valdés.
- Lienzo of Zacatepec
- 1900 Antonio Peñafiel. *Códice Mixteco: Lienzo de Zacatepec*. Mexico City: Secretaría de Fomento.
- Lind, Michael D.
- 1967 Mixtec Polychrome Pottery: A Comparison of the Late Pre-Conquest Polychrome Pottery from Cholula, Oaxaca, and the Chinantla. M.A. thesis, Universidad de los Américas, Cholula, Mexico.
- 1994 Cholula and Mixteca Polychromes: Two Mixteca-Puebla Regional Sub-styles. In Nicholson and Quiñones Keber 1994, pp. 79–99.
- Lipp, Frank
- 1982 The Mije Calendrical System: Concepts and Behavior. Ph.D. dissertation, New School for Social Research. Ann Arbor: University Microfilms.
- 1985 Mixe Ritual: An Ethnographic and Epigraphical Comparison. *Mexicon* 7, no. 5:83–87.
- 1991 *The Mixe of Oaxaca: Religion, Ritual and Healing*. Austin: University of Texas Press.
- Litvak King, Jaime
- 1978 Central Mexico as Part of the General Mesoamerican Communications System. In *Mesoamerican Communication Routes and Cultural Contacts*, edited by Thomas A. Lee, Jr., and Carlos Navarrete, pp. 115–122. Papers of the New World Archaeological Foundation 40. Provo, Utah: New World Archaeological Foundation, Brigham Young University.
- Lockhart, James
- 1985 Some Nahuatl Concepts in Postconquest Guise. *History of European Ideas* 6:465–482.
- 1993 *We People Here: Nahuatl Accounts of the Conquest of Mexico*. Berkeley and Los Angeles: University of California Press.
- López Austin, Alfredo
- 1967a Cuarenta clases de magos del mundo náhuatl. *Estudios de Cultura Náhuatl* 7:87–117.
- 1967b Términos del nahuallatolli. *Historia Mexicana* 17, no. 1:1–36.
- 1983 Nota sobre la fusión y la fisión de los dioses en el panteón Mexica. *Anales de Antropología* 20, no. 2:75–87.
- 1987 The Masked God of Fire. In *The Aztec Templo Mayor*, edited by Elizabeth H. Boone, pp. 257–291. Washington, D.C.: Dumbarton Oaks.
- 1988 *The Human Body and Ideology: Concepts of the Ancient Nahuas*. 2 vols. Translated and edited by

- Thelma Ortiz de Montellano and Bernard Ortiz de Montellano. Salt Lake City: University of Utah Press.
- 1993 *Myths of the Opossum: Pathways of Mesoamerican Mythology*. Translated by Bernard R. Ortiz de Montellano and Thelma Ortiz de Montellano. Albuquerque: University of New Mexico Press.
- 1997 *Tamoanchan, Tlalocan: Places of Mist*. Translated and edited by Bernard R. Ortiz de Montellano and Thelma Ortiz de Montellano. Niwot: University Press of Colorado.
- López de la Rosa, Edmundo, and Fernando Rocha Segura
1997 Estudio sobre las representaciones cerámicas en los códices del grupo Borgia. *Revista Española de Antropología Americana* 27:95–112.
- López Luján, Leonardo
1993 *Las ofrendas del Templo Mayor de Tenochtitlan*. Mexico City: Instituto Nacional de Antropología e Historia.
- Love, Bruce
1994 *The Paris Codex: Handbook for a Maya Priest*. Austin: University of Texas Press.
- Lupo, Alessandro
1999 Aire, viento, espíritu: Reflexiones a partir del pensamiento nahua. In *El aire: Mitos, ritos y realidades. Coloquio internacional, Granada, 5–7 de marzo de 1997*, edited by José A. González Alcantud and Carmelo Lisón Tolosana, pp. 229–261. Rubí (Barcelona): Anthropos Editorial; and Granada: Diputación Provincial, Centro de Investigaciones Etnológicas “Ángel Ganivet.”
- Lynch, Michael
1985 Discipline and the Material Form of Images: An Analysis of Scientific Visibility. *Social Studies of Science* 15:37–66.
- Malmstrom, Vincent H.
1997 *Cycles of the Sun, Mysteries of the Moon: The Calendar in Mesoamerican Civilization*. Austin: University of Texas Press.
- Marcus, Joyce
1976 The Origins of Mesoamerican Writing. *Review of Anthropology* 5:35–67.
- Martínez, Maximino
1959 *Plantas útiles de la flora mexicana*. Mexico City: Ediciones Botas.
- 1979 *Flora del Estado de México*. 2 vols. Mexico City: Biblioteca Enciclopédica del Estado de México.
- Martir de Angleria, Pedro (Martyr d’Anghiera, Peter)
1964 *Décadas del Nuevo Mundo*. 2 vols. Edited by Edmundo O’Gorman. Translated by Agustín Millares Carlo. Mexico City: José Porrúa e Hijos.
- Matos Moctezuma, Eduardo
1997 Tlaltecuhli: Señor de la Tierra. *Estudios de Cultura Náhuatl* 27:15–40.
- Maxwell, Judith M., and Craig A. Hanson
1992 *Of the Manners of Speaking That the Old Ones Had: The Metaphors of Andrés de Olmos in the TULAL Manuscript*. Salt Lake City: University of Utah Press.
- McAndrew, John
1965 *The Open Air Churches of Sixteenth-Century Mexico: Atrios, Posas, Open Chapels and Other Studies*. Cambridge, Mass.: Harvard University Press.
- Mendieta, Gerónimo de
1971 *Historia eclesiástica indiana*. Edited by Joaquín García Icazbalceta. Facsimile of the 1870 edition. Mexico City: Editorial Porrúa.
- Mengin, Ernst
1952 Commentaire du Codex Mexicanus Nos. 23–24 de la Bibliothèque Nationale de Paris. *Journal de la Société des Américanistes* 41, no. 2:387–498. With facsimile of the Codex Mexicanus published as a supplement to the *Journal*.
- Milbrath, Susan
1988 Birth Images in Mixteca-Puebla Art. In *The Role of Gender in Precolumbian Art and Architecture*, edited by Virginia E. Miller, pp. 153–177. Lanham, Md.: University Press of America.
- 1989 A Seasonal Calendar with Venus Periods in Codex Borgia 29–46. In *The Imagination of Matter: Religion and Ecology in Mesoamerican Traditions*, edited by David Carrasco, pp. 103–127. BAR International Series 515. Oxford: BAR.
- 1999 *Star Gods of the Maya: Astronomy in Art, Folklore, and Calendars*. Austin: University of Texas Press.
- 2002 New Questions concerning the Authenticity of the Grolier Codex. *Latin American Indian Literatures Journal* 18, no. 1:50–83.
- n.d. Astronomical Cycles in the Imagery of Codex Borgia 29–46. In *Cultural Astronomy in New World Cosmologies*, edited by Gary Urton and Clive Ruggles. Forthcoming.
- Miles, Suzanna W.
1952 An Analysis of Modern Middle American Calendars: A Study in Conservation. In *Acculturation in the Americas*, edited by Sol Tax. *Proceedings of the 29th International Congress of Americanists* 2:273–284. Chicago: University of Chicago Press.
- Miller, George A.
1956 The Magical Number Seven, Plus or Minus Two:

- Some Limits on Our Capacity for Processing Information. *Psychological Review* 63, no. 2:81–97.
- Miller, Mary Ellen
1986 *Art of Mesoamerica*. New York: Thames and Hudson.
- Miller, Virginia E.
1981 Pose and Gesture in Classic Maya Monumental Sculpture. Ph.D. dissertation, University of Texas at Austin.
- 1983 A Reexamination of Maya Gestures of Submission. *Journal of Latin American Lore* 9, no. 1:17–38.
- Miller, Walter S.
1952 Algunos manuscritos y libros mixes en el Museo Nacional. *Tlatoani* 1, no. 2:34–35.
- 1956 *Cuentos mixes*. With introductory notes by Alfonso Villa Rojas. Mexico City: Instituto Nacional Indigenista.
- 1966 El tonalamatl mixe y los hongos sagrados. In *Summa antropológica en homenaje a Roberto J. Weitlaner*, edited by Antonio Pompa y Pompa, pp. 317–328. Mexico City: Instituto Nacional de Antropología e Historia.
- Miram, Helga-Maria, and Victoria R. Bricker
1996 Relating Time to Space: The Maya Calendar Compasses. In *Palenque Round Table—1993, Vol. X*, edited by Merle Green Robertson, Martha Macri, and Jan McHargue, pp. 393–402. San Francisco: Pre-Columbian Art Research Institute.
- Molina, Alonso de
1970 *Vocabulario en lengua castellana y mexicana y mexicana y castellana*. 4th ed. Edited by Miguel León-Portilla. Mexico City: Editorial Porrúa.
- Monaghan, John
1998 The Person, Destiny, and the Construction of Difference in Mesoamerica. *Res* 33:137–146.
- Monaghan, John, and Byron Hamann
1998 Reading as Social Practice and Cultural Construction. In *Mexican Codices and Archeology*, edited by Gordon Brotherston. *Indiana Journal of Hispanic Literatures* 13:131–140.
- Mönnich, Anneliese
1973 Las deidades mexicanas llamadas Tonaleque, “Señores de los signos de los días.” *Indiana* 1:65–72.
- 1982 The “Tonalpohualli” of Codex Tudela and the Four Quarters of the World. In *Space and Time in the Cosmivision of Mesoamerica*, edited by Franz Tichy, pp. 97–110. Proceedings of the Symposium Presented at the XLIII International Congress of Americanists, Vancouver, Canada, August 1979.
- Lateinamerika-Studien 10. Munich: Wilhelm Fink Verlag.
- Morton, Julia F.
1981 *Atlas of Medicinal Plants of Middle America: Bahamas to Yucatan*. Springfield, Ill.: Charles C. Thomas.
- Motolinia [Toribio de Benavente]
1951 *Motolinia's History of the Indians of New Spain*. Translated and edited by Francis Borgia Steck. Washington, D.C.: Academy of American Franciscan History.
- 1971 *Memoriales o libro de las cosas de Nueva España y de los naturales de ella*. Edited by Edmundo O'Gorman. Mexico City: Instituto de Investigaciones Históricas, Universidad Nacional Autónoma de México.
- Müller, Florencia
1978 *La alfarería de Cholula*. Mexico City: Instituto Nacional de Antropología e Historia.
- Muñoz Camargo, Diego
1998 *Historia de Tlaxcala (Ms. 210 de la Biblioteca Nacional de París)*. Translated and edited by Luis Reyes García, with Javier Lira Toledo. Tlaxcala: Gobierno del Estado de Tlaxcala and Universidad Autónoma de Tlaxcala.
- Neff, Hector, Ronald L. Bishop, Edward B. Sisson, Michael D. Glascock, and Penny Sisson
1994 Neutron Activation Analysis of Late Postclassic Polychrome Pottery from Central Mexico. In Nicholson and Quiñones Keber 1994, pp. 117–141.
- Nicholson, H. B.
1955 The Birth of the Smoking Mirror. *Archaeology* 7, no. 3:165–170.
- 1960 The Mixteca-Puebla Concept in Mesoamerican Archaeology: A Re-examination. In *Men and Cultures: Selected Papers of the Fifth International Congress of Anthropological and Ethnological Sciences*, edited by Anthony F. C. Wallace, pp. 612–617. Philadelphia: University of Pennsylvania Press.
- 1961 The Use of the Term “Mixtec” in Mesoamerican Archaeology. *American Antiquity* 26:431–433.
- 1963 The Problem of the Provenience of the Members of the “Codex Borgia Group.” Unpublished manuscript.
- 1966 The Problem of the Provenience of the Members of the “Codex Borgia Group”: A Summary. In *Summa antropológica en homenaje a Roberto J. Weitlaner*, edited by Antonio Pompa y Pompa, pp. 145–158. Mexico City: Instituto Nacional de Antropología e Historia.

- 1967 A "Royal Headband" of the Tlaxcalteca. *Revista Mexicana de Estudios Antropológicos* 21:71–106.
- 1971a Pre-Hispanic Central Mexican Historiography. In *Investigaciones contemporáneas sobre historia de México: Memorias de la Tercera Reunión de historiadores mexicanos y norteamericanos*, Oaxtepec, Morelos, 4–7 de noviembre de 1969, pp. 38–81. Mexico City: Universidad Nacional Autónoma de México, El Colegio de México; Austin: University of Texas.
- 1971b Religion in Pre-Hispanic Central Mexico In *Handbook of Middle American Indians*, vol. 10, edited by Robert Wauchope, Gordon F. Ekholm, and Ignacio Bernal, pp. 395–446. Austin: University of Texas Press.
- 1973 Eduard Georg Seler, 1849–1922. In *Handbook of Middle American Indians*, vol. 13, edited by Robert Wauchope and Howard F. Cline, pp. 348–369. Austin: University of Texas Press.
- 1976 Correlating Mesoamerican Historical Traditions with Archaeological Sequence: Some Methodological Considerations. *Proceedings of the 42nd International of Americanists, Paris, 1976* 9B:187–198.
- 1978 The Deity 9 Wind "Ehecatl-Quetzalcoatl" in the Mixteca Pictorials. *Journal of Latin American Lore* 4, no. 1:61–92.
- 1985 The New Tenochtitlan Templo Mayor Coyolxauhqui-Chantico Monument. *Indiana* 10 (Gedenkschrift Gerdt Kutscher, Teil 2):77–98.
- 1988 The Provenience of the *Codex Borbonicus*: An Hypothesis. In *Smoke and Mist: Mesoamerican Studies in Honor of Thelma D. Sullivan*, edited by J. Kathryn Josserand and Karen Dakin, vol. 1, pp. 77–97. 2 vols. BAR International Series 402. Oxford: BAR.
- 1991 The Octli Cult in Late Pre-Hispanic Central Mexico. In *To Change Place: Aztec Ceremonial Landscapes*, edited by David Carrasco, pp. 158–183. Niwot: University Press of Colorado.
- 1994 The Eagle Claw/Tied Double Maize Ear Motif: The Cholula Polychrome Ceramic Tradition, and Some Members of the Codex Borgia Group. In Nicholson and Quiñones Keber 1994, pp. 101–117.
- 2000 Hugh Thomas' *Conquest*: Observations on the Coverage of the Indigenous Cultures. In *In Chalcibuiltl in Quetzalli, Precious Greenstone Precious Quetzal Feather: Mesoamerican Studies in Honor of Doris Heyden*, edited by Eloise Quiñones Keber, pp. 129–136. Lancaster, Calif.: Labyrinthos.
- 2001 *Topiltzin Quetzalcoatl: The Once and Future Lord of the Toltecs*. Niwot: University Press of Colorado.
- Nicholson, H. B., and Eloise Quiñones Keber
1983 *Art of Aztec Mexico: Treasures of Tenochtitlan*. Washington, D.C.: National Gallery of Art.
- 1991 Ballcourt Images in Central Mexican Native Traditional Pictorial Manuscripts. In *Mesoamerican Ballgame: Papers Presented at the International Colloquium, "The Mesoamerican Ballgame 2000 BC–AD 2000," Leiden, June 30th–July 3rd, 1988*, edited by Gerard W. van Bussel, Paul L. F. van Dongen, and Ted. J. J. Leyenaar, pp. 119–133. Leiden: Rijksmuseum voor Volkenkunde.
- 1994 (editors) *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*. Lancaster, Calif.: Labyrinthos.
- Noguera, Eduardo
1929 Los altares de sacrificio de Tizatlan, Tlaxcala. In *Ruinas de Tizatlan, Tlaxcala*, pp. 24–64, plates 1–4. Publicaciones de la Secretaría de Educación Pública, vol. 15, no. 11. Mexico City: Talleres Gráficos de la Nación.
- 1954 *La cerámica arqueológica de Cholula*. Mexico City: Editorial Guaranía.
- Noriega, Raúl
1954– Claves matemático-astronómicas del sistema
1955 calendárico de los antiguos Mexicanos y demostración de la función astronómica del calendario de 260 días. *Revista Mexicana de Estudios Antropológicos* 14:269–280.
- Nowotny, Karl Anton
1961 *Tlacuilolli: Die mexikanischen Bilderhandschriften, Stil und Inhalt, mit einem Katalog der Codex-Borgia-Gruppe*. Berlin: Verlag Gebr. Mann.
- 1974 Herkunft und Inhalt des Codex Borbonicus. In *Codex Borbonicus 1974*, pp. 11–25.
- 1976 *Codex Borgia: Kommentar*. Graz: Akademische Druck- u. Verlagsanstalt.
- 2005 *Tlacuilolli: Style and Contents of the Mexican Pictorial Manuscripts, with a Catalogue of the Borgia Group*. Translated and edited by George A. Everett, Jr., and Edward B. Sisson. Norman: University of Oklahoma Press.
- Nuttall, Zelia
1928 *La observación del paso del sol por el zenit por los antiguos habitantes de la América tropical*. Publicaciones de la Secretaría de Educación Pública 17, no. 20. Mexico City: Talleres Gráficos de la Nación.
- Oettinger, Marion, Jr.
1979 Dos métodos de adivinación tlapaneca: Medir el hueso y echar los granos de maíz. *Anales de Antropología* 16:225–232.

- Oettinger, Marion, Jr., and Patricia P. Oettinger
 1975 The Burning of the Firewood Ceremony: Final Consecration of Marriage in the Tlapanec Community of Tlacoapa, Guerrero. In *Balance y perspectiva de la antropología de Mesoamérica y del Norte de México*, pp. 195–205. Sociedad Mexicana de Antropología, 13th Mesa Redonda, 1973, Xalapa, Mexico.
- Ojeda Díaz, María de los Ángeles
 1997 Los códices del Grupo Borgia. *Arqueología Mexicana* 4, no. 23:50–55.
- Olivier, Guilhem
 1998 Tepeyollotl, “corazón de la montaña” y “señor del eco”: El dios jaguar de los antiguos Mexicanos. *Estudios de Cultura Náhuatl* 28:99–141.
 1999 Huehuecoyotl, “coyote viejo,” el músico transgresor dios de los Otomíes o avatar de Tezcatlipoca? *Estudios de Cultura Náhuatl* 30:113–131.
 2003 *Mockeries and Metamorphoses of an Aztec God: Tezcatlipoca, “Lord of the Smoking Mirror.”* Translated by Michel Besson. Niwot: University Press of Colorado.
- Ortiz de Montellano, Bernard R.
 1990 *Aztec Medicine, Health, and Nutrition*. New Brunswick, N.J.: Rutgers University Press.
- Paddock, John (editor)
 1966 *Ancient Oaxaca*. Stanford: Stanford University Press.
 1985 Covert Content in Codices Borgia and Nuttall. *Ethnos* 13, no. 4:358–380.
- Palka, Joel W.
 2002 Left/Right Symbolism and the Body in Ancient Maya Iconography and Culture. *Latin American Antiquity* 13, no. 4:419–443.
- Paso y Troncoso, Francisco del
 1896 *Los libros de Anáhuac*. Published with Ehrle 1896.
 1898a *Descripción del Códice Cospiano, manuscrito pictórico de los antiguos Nauas que se conserva en la Biblioteca de la Universidad de Bolonia, reproducido en fotocromografía a expensas de S. E. el Duque de Loubat*. Accompanied by a facsimile of the codex. Rome: Danesi.
 1898b *Descripción, historia, y exposición del código pictórico de los antiguos Náhuas que se conserva en la Biblioteca de la Cámara de Diputados de París (antiguo Palais Bourbon)*. Florence: Tipografía de Salvador Landi.
- Payne, Stanley E., and Michael P. Closs
 1986 A Survey of Aztec Numbers and Their Uses. In *Native American Mathematics*, edited by Michael P. Closs, pp. 213–235. Austin: University of Texas Press.
- Peirce, Charles Sanders
 1931–
 1958 *Collected Papers of Charles Sanders Peirce*. Edited by Charles Hartshorne and Paul Weiss. 8 vols. Cambridge, Mass.: Harvard University Press.
- Peterson, Jeanette Favrot
 1983 Sacrificial Earth: The Iconography and Function of Malinalli Grass in Aztec Culture. In *Flora and Fauna Imagery in Precolumbian Cultures: Iconography and Function*, edited by Jeanette F. Peterson, pp. 113–148. Proceedings of the 44th International Congress of Americanists, Manchester 1982. BAR International Series 171. Oxford: BAR.
 1990 *Precolumbian Flora and Fauna: Continuity of Plant and Animal Themes in Mesoamerican Art*. San Diego, Calif.: Mingei International Museum of World Folk Art.
 1993 *The Paradise Garden Murals of Malinalco: Utopia and Empire in Sixteenth-Century Mexico*. Austin: University of Texas Press.
 n.d. *Nigra sum sed formosa*: The Black Christ of Chalma and the Virgin of Guadalupe in Mexico. Paper presented in the symposium Black Christs in the Americas, Spellman College 1998 (draft of November 3, 2000).
- Pohl, John M. D.
 1994 *The Politics of Symbolism in the Mixtec Codices*. Vanderbilt University Publications in Anthropology 46. Nashville, Tenn.: Vanderbilt University.
 1998 Themes of Drunkenness, Violence, and Factionalism in Tlaxcalan Altar Paintings. *Res: Anthropology and Aesthetics* 33:184–207.
 1999 The Lintel Paintings of Mitla and the Function of Mitla Palaces. In *Mesoamerican Architecture as a Cultural Symbol*, edited by Jeff Karl Kowalski, pp. 177–197. Oxford: Oxford University Press.
 2003a Creation Stories, Hero Cults, and Alliance Building: Confederacies of Central Mexico. In Smith and Berdan 2003, pp. 61–66.
 2003b Ritual and Iconographic Variability in Mixteca-Puebla Polychrome Pottery. In Smith and Berdan 2003, pp. 201–206.
 2003c Ritual Ideology and Commerce in the Southern Mexican Highlands. In Smith and Berdan 2003, pp. 172–177.
 2003d Royal Marriage and Confederacy Building among the Eastern Nahuas, Mixtecs, and Zapotecs. In Smith and Berdan 2003, pp. 243–248.
- Pohl, John M. D., and Bruce Byland
 1990 Mixtec Landscape Perception and Archaeological Settlement Patterns. *Ancient Mesoamerica* 1, no. 1: 113–131.

- 1994 The Mixteca-Puebla Style and Early Postclassic Socio-political Interaction. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H. B. Nicholson and Eloise Quiñones Keber, pp. 189–199. Culver City, Calif.: Labyrinthos.
- Pomar, Juan Bautista. See Acuña 1982–1988, 8:21–113.
- Porkert, Manfred
- 1974 *The Theoretical Foundations of Chinese Medicine: Systems of Correspondence*. Cambridge: Massachusetts Institute of Technology Press.
- Prem, Hanns
- 1978 Comentario a las partes calendáricas del Codex Mexicanus 23–24. *Estudios de Cultura Náhuatl* 13:267–288.
- 1984 The Chronological Dilemma. In *Proceedings of the 44th ICA-Symposium: The Native Sources and the History of the Valley of Mexico*, edited by Jacqueline de Durand-Forest, pp. 5–25. BAR International Series 204. London: BAR.
- 1988 Calendrical Traditions in the Writings of Sahagún. In *The Work of Bernardino de Sahagún: Pioneer Ethnographer of Sixteenth-Century Mexico*, edited by J. Jorge Klor de Alva, H. B. Nicholson, and Eloise Quiñones Keber, pp. 135–149. Albany: Institute for Mesoamerican Studies, State University of New York at Albany.
- n.d. *Manual de la cronología mexicana*. Forthcoming.
- Proceso
- 1910 *Proceso criminal del Santo Oficio de la Inquisición y del Fiscal en su nombre contra Don Carlos, indio principal de Tezcuco*. Edited by Luis González Obregón. Publicaciones del Archivo General y Público de la Nación, 1. Mexico City: Archivo General y Público de la Nación.
- Quiñones Keber, Eloise
- 1987 Ritual and Representation in the Tonalamatl of the Codex Borbonicus. *Latin American Indian Literatures Journal* 3, no. 2:184–195.
- 1988 The Aztec Image of Topiltzin Quetzalcoatl. In *Smoke and Mist: Mesoamerican Studies in Memory of Thelma D. Sullivan*, edited by J. Kathryn Josserand and Karen Dakin, vol. 1, pp. 329–343. BAR International Series 402(i). Oxford: BAR.
- 1991 Xolotl: Dogs, Death, and Deities in Aztec Myth. *Latin American Indian Literatures Journal* 7, no. 2:229–239.
- 1993 Tonacatecuhtli and Tonacacihuatl: Aztec Deities of Transcendence and Tonalli. *Latin American Indian Literatures Journal* 9, no. 2:173–186.
- 1994 The Codex Style: Which Codex? Which Style? In Nicholson and Quiñones Keber 1994, pp. 143–152.
- 1995 *Codex Telleriano-Remensis: Ritual, Divination, and History in a Pictorial Aztec Manuscript*. Includes a facsimile of the codex. Austin: University of Texas Press.
- 2002 Painting Divination in the Florentine Codex. In *Representing Aztec Ritual: Performance, Text, and Image in the Work of Sahagún*, edited by Eloise Quiñones Keber, pp. 251–276. Niwot: University Press of Colorado.
- Rabin, Emily
- 1979 The War of Heaven in Codices Zouche-Nuttall and Bodley: A Preliminary Study. *Proceedings of the 42nd International Congress of Americanists (Paris)* 7:173–182.
- 1980 Chronology in the Mixtec Codices: An Overview. Paper presented at the 1980 meeting of the American Society for Ethnohistory, Colorado Springs, Colorado.
- Ramsey, James R.
- 1982 An Examination of Mixtec Iconography. In *Aspects of the Mixteca-Puebla Style and Mixtec and Central Mexican Culture in Southern Mesoamerica: Papers from a Symposium Organized by Doris Stone*, edited by Jennifer S. H. Brown and E. Wyllys Andrews V, pp. 33–42. New Orleans: Middle American Research Institute, Tulane University.
- Read, Kay Almere
- 1998 *Time and Sacrifice in the Aztec Cosmos*. Bloomington: Indiana University Press.
- Recinos, Adrián, and Delia Goetz (translators and editors)
- 1953 *The Annals of the Cakchiquels*. Published with Title of the Lords of Totonicapán (translated by Dionisio José Chonay and Delia Goetz). Norman: University of Oklahoma Press.
- Redfield, Robert, and Alfonso Villa Rojas
- 1934 *Chan Kom: A Maya Village*. Publication 448. Washington, D.C.: Carnegie Institution of Washington.
- Reyes García, Luis
- 1997 Dioses y escritura pictográfica. *Arqueología Mexicana* 4, no. 23:24–33.
- Riese, Berthold
- 1982 Eine mexikanische Gottheit im Venuskapitel der Mayahandschrift Codex Dresdensis. *Bulletin de la Société Suisse des Américanistes* 46:37–39.
- Robertson, Donald
- 1959 *Mexican Manuscript Painting of the Early Colonial Period: The Metropolitan Schools*. New Haven: Yale University Press.
- 1963 The Style of the Borgia Group of Mexican Pre-Conquest Manuscripts. In *Studies in Western Art: Acts of the Twentieth International Congress of the*

- History of Art*, edited by Millard Meiss et al., vol. 3 (*Latin American Art and the Baroque Period in Europe*), pp. 148–164, plates 49–52.
- 1966 The Mixtec Religious Manuscripts. In *Ancient Oaxaca*, edited by John Paddock, pp. 298–312. Stanford: Stanford University Press.
- Román Berrelleza, Juan Alberto
- 1987 Offering 48 of the Templo Mayor: A Case of Child Sacrifice. In *The Aztec Templo Mayor*, edited by Elizabeth Hill Boone, pp. 131–143. Washington, D.C.: Dumbarton Oaks.
- Rossell, Cecilia, María de los Ángeles Ojeda Díaz
- 2003 *Las mujeres y sus diosas en los códices prehispánicos de Oaxaca*. Mexico City: Centro de Investigaciones y Estudios Superiores en Antropología Social.
- Rotman, Brian
- 1993 *Taking God Out of Mathematics and Putting the Body Back In: An Essay in Corporeal Semiotics*. Stanford: Stanford University Press.
- Roys, Ralph
- 1967 *The Book of the Chilam Balam of Chumayel*. Norman: University of Oklahoma Press.
- Ruiz de Alarcón, Hernando
- 1984 *Treatise on the Heathen Superstitions That Today Live among the Indians Native to This New Spain, 1629*. Translated and edited by J. Richard Andrews and Ross Hassig. Norman: University of Oklahoma Press.
- Sahagún, Bernardino de
- 1953–
1982 *Florentine Codex: The General History of the Things of New Spain*. Translated and edited by Charles E. Dibble and Arthur J. O. Anderson. 12 books in 13 vols. Santa Fe: School of American Research and the University of Utah.
- 1956 *Historia general de las cosas de Nueva España*. Edited by Ángel Ma. Garibay K. 4 vols. Mexico City: Biblioteca Porrúa.
- 1993 *Primeros Memoriales: Facsimile Edition*. Photographed by Ferdinand Anders. Norman: University of Oklahoma Press.
- 1997 *Primeros Memoriales by Bernardino de Sahagún: Paleography of Nahuatl Texts and English Translation*. Edited by Thelma D. Sullivan. Revised by H. B. Nicholson et al. Norman: University of Oklahoma Press.
- Sampson, Geoffrey
- 1980 *Making Sense*. Oxford: Oxford University Press.
- 1985 *Writing Systems: A Linguistic Introduction*. Stanford, Calif.: Stanford University Press.
- Sandstrom, Alan R.
- 1991 *Corn Is Our Blood: Culture and Ethnic Identity in a Contemporary Aztec Indian Village*. Norman: University of Oklahoma Press.
- Sandstrom, Alan R., and Pamela E. Sandstrom
- 1986 *Traditional Papermaking and Paper Cult Figures of Mexico*. Norman: University of Oklahoma Press.
- Schultze Jena, Leonhard
- 1933–1938 *Indiana*. 3 vols. Jena: Verlag von Gustav Fischer.
- Seler, Eduard
- 1887 Der Codex Borgia und die verwandten aztekischen Bilderschriften. *Verhandlungen der Berliner Gesellschaft für Anthropologie*, Jahrgang 1887, in *Zeitschrift für Ethnologie* 19:105–114.
- 1890 Das Tonalamatl der Aubin'schen Sammlung und die verwandten Kalenderbücher. *Proceedings of the 7th International Congress of Americanists* (Berlin): 521–735.
- 1898 Die Venusperiode in den Bilderschriften der Codex Borgia-Gruppe. *Verhandlungen der Berliner Anthropologischen Gesellschaft*, July 16, 1898. *Zeitschrift für Ethnologie* 30:346–383.
- 1900–
1901 *The Tonalamatl of the Aubin Collection: An Old Mexican Picture Manuscript in the Paris National Library (Manuscripts Mexicains Nos. 18–19), Published at the Expense of His Excellency the Duke of Loubat*. Berlin and London: Hazell, Watson, and Viney. German edition 1900.
- 1901–
1902 *Codex Fejérváry-Mayer: An Old Mexican Picture Manuscript in the Liverpool Free Public Museums (12014/M), Published at the Expense of His Excellency the Duke of Loubat*. Berlin and London: T. and A. Constable. German edition 1901.
- 1902–
1903 *Codex Vaticanus No. 3773 (Codex Vaticanus B): An Old Mexican Picture Manuscript in the Vatican Library, Published at the Expense of His Excellency the Duke of Loubat*. Berlin and London: T. and A. Constable. German edition 1902.
- 1902–
1923 *Gesammelte Abhandlungen zur Amerikanischen Sprach- und Alterthumskunde*. 5 vols. Berlin: A. Asher.
- 1904a Venus Period in the Picture Writings of the Borgia Codex Group. In *Mexican and Central American Antiquities, Calendar Systems, and History*, edited by Charles P. Bowditch, pp. 355–391. Smithsonian Institution, Bureau of American Ethnology Bulletin 28. Washington, D.C.: United States Government Printing Office. English translation of Seler 1898.
- 1904b Wall Paintings of Mitla: A Mexican Picture Writing in Fresco. In *Mexican and Central American Antiquities, Calendar Systems, and History*, edited by Charles P. Bowditch, pp. 243–324. Smith-

- sonian Institution, Bureau of American Ethnology Bulletin 28. Washington, D.C.: United States Government Printing Office.
- 1904–
1909 *Codex Borgia: Eine altmexikanische Bilderschrift der Bibliothek der Congregatio de Propaganda Fide, Hrs. auf Kosten Seiner Excellenz des Herzogs von Loubat.* 3 vols. Berlin: Gebr. Unger.
- 1960–
1961 *Gesammelte Abhandlungen zur Amerikanischen Sprach- und Altertumskunde.* 5 vols. Reprint of 1902–1923 edition. Graz: Akademische Druck- u. Verlagsanstalt.
- 1963 *Comentarios al Códice Borgia.* Translated by Mariana Frenk. 3 vols., including a facsimile of the codex. Mexico City: Fondo de Cultura Económica. Reprinted 1988.
- 1990–
1998 *Collected Works in Mesoamerican Linguistics and Archaeology.* 6 vols. Translated and edited by Charles P. Bowditch and Frank E. Comparato. Culver City, Calif.: Labyrinthos.
- Sellen, Adam
1998 The Headlong Plunge in the Ritual Codices. *Indiana Journal of Hispanic Literatures* 13:75–81.
- Serna, Jacinto de la
1953 Manual de ministros de indios para el conocimiento de sus idolatrías, y extirpación de ellas. In *Tratado de las idolatrías, supersticiones, dioses, ritos, hechicerías y otras costumbres gentílicas de las razas aborígenes de México*, edited by Francisco del Paso y Troncoso, vol. 1, pp. 40–368. 2nd ed. Mexico City: Ediciones Fuente Cultural.
- Siméon, Rémi
1981 *Diccionario de la lengua náhuatl o mexicana.* Translated by Josefina Oliva de Coll. Mexico City: Siglo Veintiuno.
- Simonin, Martine
1989 De los puntos cardinales en el Códice Aubin núm. 20. *TRACE: Travaux et Recherches dans les Amériques du Centre d'Études Mexicains et Centroaméricaines* 16:131–146.
- Sisson, Edward B.
1983 Recent Work on the Borgia Group Codices. *Current Anthropology* 24:653–656.
- Sisson, Edward B., and T. Gerald Lilly
1994a A Codex-Style Mural from Tehuacan Viejo, Puebla, Mexico. *Ancient Mesoamerica* 5, no. 1:33–44.
1994b The Mural of the Chimalas and the Codex Borgia. In Nicholson and Quiñones Keber 1994, pp. 25–44.
- Smith, Mary Elizabeth
1973a *Picture Writing from Ancient Southern Mexico: Mixtec Place Signs and Maps.* Norman: University of Oklahoma Press.
1973b The Relationship between Mixtec Manuscript Painting and the Mixtec Language: A Study of Some Personal Names in Codices Muro and Sánchez Solís. In *Mesoamerican Writing Systems: A Conference at Dumbarton Oaks, October 30th and 31st, 1971*, edited by Elizabeth P. Benson, pp. 47–75. Washington, D.C.: Dumbarton Oaks.
1983 The Mixtec Writing System. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*, edited by Kent V. Flannery and Joyce Marcus, pp. 238–245. New York: Academic Press.
1994 Why the Second Codex Selden Was Painted. In *Caciques and Their People: A Volume in Honor of Ronald Spores*, edited by Joyce Marcus and Judith Francis Zeitlin, pp. 111–141. Museum of Anthropology, Anthropological Papers No. 89. Ann Arbor: University of Michigan.
- Smith, Mary Elizabeth, and Ross Parmenter
1991 *The Codex Tulane.* New Orleans: Middle American Research Institute, Tulane University.
- Smith, Michael E., and Frances F. Berdan (editors)
2003 *The Postclassic Mesoamerican World.* Salt Lake City: University of Utah Press.
- Solís, Felipe
1991 *Gloria y fama mexicana.* Mexico City: Smurfit Carton y Papel de México.
- Šprajc, Ivan
1993a The Venus-Rain-Maize Complex in the Mesoamerican World View: Part I. *Journal for the History of Astronomy* 24:17–70.
1993b The Venus-Rain-Maize Complex in the Mesoamerican World View: Part II. *Archaeoastronomy* 18:S27–S53. Supplement to the *Journal for the History of Astronomy* 25.
1996 *Venus, lluvia y maíz: Simbolismo y astronomía en la cosmovisión mesoamericana.* Colección Científica no. 318. Mexico City: Instituto Nacional de Antropología e Historia.
- Spranz, Bodo
1973a *Los dioses en los códices mexicanos del Grupo Borgia.* Mexico City: Fondo de Cultura Económica.
1973b Late Classic Figurines from Tlaxcala, Mexico, and Their Possible Relation to the Codex Borgia-Group. In *Mesoamerican Writing Systems: A Conference at Dumbarton Oaks, October 30th and 31st, 1971*, edited by Elizabeth P. Benson, pp. 217–226. Washington, D.C.: Dumbarton Oaks.
1982 Archaeology and the Art of Mexican Picture Writing.

- ing. In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by Elizabeth H. Boone, pp. 159–173. Washington, D.C.: Dumbarton Oaks.
- Stenzel, Werner
1970 The Sacred Bundles in Mesoamerican Religion. *Proceedings of the 38th International Congress of Americanists, Stuttgart-Munich, 12–18 August 1968* 2:347–352.
- Stone, Andrea
2002 Spirals, Ropes, and Feathers: The Iconography of Rubber Balls in Mesoamerican Art. *Ancient Mesoamerica* 13:21–39.
- Sullivan, Thelma D.
1966 Pregnancy, Childbirth, and the Deification of the Women Who Died in Childbirth. *Estudios de Cultura Náhuatl* 6:63–95.
1976 The Mask of Itztlacoliuhqui. *Proceedings of the 41st International Congress of Americanists* 2:252–262.
1982 Tlazolteotl-Ixcuina: The Great Spinner and Weaver. In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by Elizabeth H. Boone, pp. 7–35. Washington, D.C.: Dumbarton Oaks.
1988 *Thelma Sullivan's Compendium of Nahuatl Grammar*. Translated from the Spanish by Thelma D. Sullivan and Neville Stiles. Edited by Wick R. Miller and Karen Dakin. Provo: University of Utah Press.
- Taube, Karl A.
1986 The Teotihuacan Cave of Origin: The Iconography and Architecture of Emergence Mythology in Mesoamerica and the American Southwest. *Res: Anthropology and Aesthetics* 12:51–82.
1993 The Bilimek Pulque Vessel: Starlore, Calendars, and Cosmology of Late Postclassic Central Mexico. *Ancient Mesoamerica* 4:1–15.
2000 The Turquoise Hearth: Fire, Self-Sacrifice, and the Central Mexican Cult of War. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by David Carrasco, Lindsay Jones, and Scott Sessions, pp. 269–340. Boulder: University Press of Colorado.
2001 The Breath of Life: The Symbolism of Wind in Mesoamerica and the American Southwest. In *The Road to Aztlan: Art from a Mythic Homeland*, edited by Virginia M. Fields and Victor Zamudio-Taylor, pp. 102–123. Los Angeles: Los Angeles County Museum of Art.
- Taube, Karl A., and Bonnie L. Bade
1991 *An Appearance of Xiuhtecutli in the Dresden Venus Pages*. Research Reports on Ancient Maya Writing, vol. 35. Washington, D.C.: Center for Maya Research.
- Tedlock, Barbara
1982 *Time and the Highland Maya*. Albuquerque: University of New Mexico Press.
- Tedlock, Dennis (translator and editor)
1985 *Popol Vuh: The Mayan Book of the Dawn of Life*. New York: Simon and Schuster.
- Tena, Rafael
1987 *El calendario mexica y la cronografía*. Mexico City: Universidad Nacional Autónoma de México.
- Terraciano, Kevin
2001 *The Mixtecs of Colonial Oaxaca: Ñudzahui History, Sixteenth through Eighteenth Centuries*. Stanford: Stanford University Press.
- Thies, Frauke Johanna
1979 Analyse und Interpretation der Seiten 75 und 76 und der 12. und 13. Zeile der Seiten 77 und 78 des Codex Madrid. *Proceedings of the 42nd International Congress of Americanists, Paris* 7:259–266.
- Thompson, J. Eric S.
1934 Sky Bearers, Colors and Directions in Maya and Mexican Religion. *Contributions to American Archaeology* 2, 10:209–242. Carnegie Institution of Washington Publication 436.
1966 Merchant Gods of Middle America. In *Summa antropológica en homenaje a Roberto J. Weitlaner*, edited by Antonio Pompa y Pompa, pp. 159–172. Mexico City: Instituto Nacional de Antropología e Historia.
1971 *Maya Hieroglyphic Writing: An Introduction*. 3rd ed. Norman: University of Oklahoma Press.
1972 *A Commentary on the Dresden Codex*. Philadelphia: American Philosophical Society.
- Tonalamatl Aubin
1900–1901 See Seler 1900–1901.
1981 *El Tonalamatl de la Colección de Aubin: Antiguo manuscrito mexicano en la Biblioteca Nacional de París (Manuscrito mexicain No. 18–19)*. Reprint of the 1900–1901 facsimile, with “Estudio introductorio” by Carmen Aguilera, and drawings and explanatory tables by Eduard Seler. Mexico City: Gobierno del Estado de Tlaxcala.
- Torquemada, Juan de
1975–
1983 *Monarquía indiana: De los veinte y un libros rituales y monarquía indiana, con el origen y guerras de los indios occidentales, de sus poblaciones, descubrimiento, conquista, conversión y otras cosas maravillosas de la misma tierra*. 7 vols. Edited by Miguel León-Portilla. Mexico City: Universidad Nacional Autónoma de México.

- Toscano, Salvador
1952 *Arte precolombino de México y de América Central*. Mexico City: Universidad Nacional Autónoma de México.
- Troike, Nancy P.
1982 The Interpretation of Poses and Gestures in the Mixtec Codices. In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by Elizabeth H. Boone, pp. 175–206. Washington, D.C.: Dumbarton Oaks.
- Tudela de la Orden, José
1980 *El Códice Tudela*. Accompanied by a facsimile of the codex. Madrid: Ediciones Cultura Hispánica.
- Turner, Victor W.
1975 *Revelation and Divination in Ndembu Ritual*. Ithaca: Cornell University Press.
- Urcid, Javier
2001 *Zapotec Hieroglyphic Writing*. Studies in Pre-Columbian Art and Archaeology, no. 34. Washington, D.C.: Dumbarton Oaks.
- Urton, Gary, with the collaboration of Primitivo Nina Llanos
1997 *The Social Life of Numbers: A Quechua Ontology of Numbers and Philosophy of Arithmetic*. Austin: University of Texas Press.
- Uruñuela, Gabriela, Patricia Plunket, Gilda Hernández, and Juan Albaitero
1997 Biconical God Figurines from Cholula and the *Codex Borgia*. *Latin American Antiquity* 8:63–70.
- Vail, Gabrielle, and Anthony Aveni (editors)
2004 *The Madrid Codex: New Approaches to Understanding an Ancient Maya Manuscript*. Boulder: University Press of Colorado.
- van der Loo, Peter
1982 Rituales con majojos contados en el Grupo Borgia y entre los Tlapanecos de hoy día. In *Coloquio Internacional: Los indígenas de México en la época prehispánica y en la actualidad*, edited by Maarten Jansen and Ted Leyenaar, pp. 232–243. Leiden: Rutgers B. V.
- 1987 *Códices, costumbres, y continuidad: Un estudio de la religión mesoamericana*. *Indiaanse Studies* 2. Leiden: Archeologisch Centrum R. U. Leiden.
- 1989 Thematical Units in Mesoamerican Religion: Why Deer Hunting and Adultery Are a Dangerous Combination. In *The Imagination of Matter: Religion and Ecology in Mesoamerican Traditions*, edited by David Carrasco, pp. 31–49. BAR International Series 515. Oxford: BAR.
- 1994 Voicing the Painted Image: A Suggestion for Reading the Reverse of the Codex Cospi. In *Writing without Words: Alternative Literacies in Mesoamerica and the Andes*, edited by Elizabeth Hill Boone and Walter D. Mignolo, pp. 77–86. Durham: Duke University Press.
- Viesca T., Carlos, Andrés Aranda C., and Mariblanca Ramos
1998 El cuerpo y los signos calendáricos del *tonalamatl* entre los nahuas. *Estudios de Cultura Náhuatl* 28:143–158.
- Vié-Wohrer, Anne-Marie
1999 *Xipe Totec, Notre Seigneur l'Écorché: Étude glyphique d'un dieu aztèque*. 2 vols. Mexico City: Centre Français d'Études Mexicaines et Centraméricaines.
- Villacorta C., J. Antonio, and Carlos A. Villacorta
1933 *Códices mayas*. Guatemala City: Tipografía Nacional.
- Vogt, Evon Z.
1969 *Zinacantan: A Maya Community in the Highlands of Chiapas*. Cambridge: Harvard University Press.
- Waterman, T. T.
1916 The Delineation of the Day-Signs in the Aztec Manuscripts. *University of California Publications in American Archaeology and Ethnology* 11, no. 6: 297–398.
- Webster's
1963 *Webster's Third New International Dictionary*. Edited by Philip Babcock Grove. New York: G. C. Merriam and Co.
- Weitlaner, Robert J.
1958 Un calendario de los Zapotecos del Sur. *Proceedings of the 32nd International Congress of Americanists, Copenhagen, 1956*: 296–299.
- Weitlaner, Robert J., and Gabriel de Cicco
1962 La jerarquía de los dioses zapotecos del sur. *Proceedings of the 34th International Congress of Americanists, Vienna, 1960*: 695–710.
- Weitlaner-Johnson, Irmgard, and Robert J. Weitlaner
1963 Nuevas versiones sobre calendarios mijes. *Revista Mexicana de Estudios Antropológicos* 19:41–63.
- Weitzmann, Kurt
1970 *Illustrations in Roll and Codex: A Study of the Origin and Method of Text Illustration*. Princeton: Princeton University Press.
- Whittaker, Gordon
1986 The Mexican Names of Three Venus Gods in the Dresden Codex. *Mexicon* 8, no. 3: 56–60.
- Wilkerson, S. Jeffrey K.
1974 The Ethnographic Works of Andrés de Olmos, Precursor and Contemporary of Sahagún. In *Sixteenth-century Mexico: The Work of Sahagún*,

- edited by Munro S. Edmonson, pp. 27–77. Albuquerque: University of New Mexico Press; Santa Fe: School of American Research.
- Williams García, Robert
- 1963 *Los Tepelhuas*. Xalapa: Universidad Veracruzana.
- Zorita, Alonso
- 1963 *Life and Labor in Ancient Mexico: The Brief and Summary Relation of the Lords of New Spain*. Edited and translated by Benjamin Keen. New Brunswick, N.J.: Rutgers University Press.

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